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The Impact of Professional Development on Reading Achievement and Teacher Efficacy in Delivering Small Group Reading Instruction

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THE IMPACT OF PROFESSIONAL DEVELOPMENT ON READING ACHIEVEMENT AND TEACHER EFFICACY IN DELIVERING SMALL GROUP READING INSTRUCTION

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Dedication

For everyone who has loved me and supported me on this journey.

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Finally for my father, Joel, who always pushed me to do my best; I know you have been with me on this journey and I know you are proud.

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Abstract

Literacy is an equity issue of significant importance; students who do not read on grade level by the end of third grade are more likely to drop out of high school and less likely to attend post-secondary education (Lesnick, Goerge, Smithgall, & Gwynne, 2010). Early interventions in Kindergarten through second grade can ameliorate problems which struggling readers experience (Torgesen, 2004). Teachers are poorly prepared to provide the type of intervention instruction necessary to assist these struggling students (Birman, Desimone, Porter, & Garet, 2000; Neuman & Cunningham, 2009). The purpose of this mixed-methods participatory action research study was to examine the effects of professional development designed on principles of effectiveness and factors influencing self-efficacy on student reading achievement and self-efficacy beliefs of participating teachers in K through second grade. A dependent sample t-test showed students of teachers participating in professional development demonstrated statistically significant increases in reading achievement, as measured by the PALs concept of word assessments and guided reading level. The Teachers' Sense of Efficacy for Literacy Instruction (TSELI) instrument assessed teachers feelings of efficacy pre and post training; a dependent sample t-test demonstrated teachers experienced statistically significant increases in literacy self-efficacy. Interview data indicated that the verbal persuasion, vicarious and mastery experiences from the professional development impacted their feelings of self-efficacy. Recommendations include: implement future professional development based on the study model; train remaining teachers in the same manner; employ a part-time literacy supervisor to ensure fidelity going forward.

THE IMPACT OF PROFESSIONAL DEVELOPMENT ON READING ACHIEVEMENT AND TEACHER EFFICACY IN DELIVERING SMALL GROUP READING INSTRUCTION

CHAPTER 1

INTRODUCTION

Background and Statement of Problem

The education system in the United States bears the burden of being a great equalizer, providing those who would seek to improve their lives with an opportunity to climb the socioeconomic ladder. Each student who enters the school house doors brings with him or her a variety of experiences and knowledge that will either be a help or a hindrance. Some begin Kindergarten with letter knowledge and a love for reading, while others begin never having held a crayon or writing implement. Educators are tasked with providing vastly different students with appropriate instruction to close the inherent gaps, while pushing high achieving students to reach their full potential.

The importance of reading instruction at the elementary level cannot be underestimated. In fact, reading performance during third grade is a strong predictor of high school graduation, as students who do not read proficiently in third grade are four times more likely to drop out (Hernandez, 2011). The implications go beyond high school completion to college admissions; a study by the Annie E. Casey Foundation found that 53% of third graders reading on grade level and 72% reading above grade level attended college, while only 18% of those who read below grade level will attend college (Lesnick, Goerge, Smithgall, & Gwynne, 2010). It is these students who are not proficient readers by the end of third grade that will become the "least productive and

most costly citizens of tomorrow" (Fiester, 2010, p.7) with an increased likelihood of dropping out of high school and lacking post-secondary education (Lesnick et al., 2010). Further, individuals without a high school diploma are "more likely to be incarcerated than those with higher levels of education" (Lesnick et al., 2010, p. 5). These factors make literacy instruction not only an educational issue, but also an equity issue with far reaching implications for society.

The time between third and fourth grade is critical for students learning to read. In this crucial window students switch from learning to read to reading to learn (Fiester, 2010; Hernandez, 2011; Lesnick et al., 2010). Until this time, students spend time learning the pillars of early literacy instruction: phonemic awareness, phonics, fluency, vocabulary and comprehension. As children progress in their reading abilities, the focus on reading instruction becomes more about comprehension and reading to build vocabulary and less about the rudiments of learning to decode words (Armbruster, Lehr, & Osborn, 2001; Fiester, 2010). If children do not navigate this time successfully they are at risk of becoming failing students (Fiester, 2010).

Policy makers and politicians are aware of the importance of reading on grade level. Beginning with Goals 2000, to the No Child Left Behind Act (NCLB) of 2002, to today's Every Student Succeeds Act (ESSA), there has been an emphasis on reading achievement in the elementary grades into high school (Birman, 2013; Virginia Department of Education [VDOE], 2016). While the implementation of some of these policies and laws has been much maligned, particularly NCLB, their intent of ensuring all children read on grade level is laudable. The government is seeking to guarantee equal

access for all children to the American dream, but grade level reading proficiency cannot be legislated.

There are many factors that can impact reading achievement, like a mother's education level, premature birth, poor nutrition and access to texts; however schools can only influence a portion of these causes (Allington, 2006; Fiester, 2010; Jensen, 2013). The longer students struggle with reading difficulties, the greater the gaps grow between these children and their peers who are successful. Torgesen (2002) found that the use of early reading intervention to address reading deficiencies before gaps in learning are large is critical to improving reading abilities at a young age, in Kindergarten or first grade if possible. It is important to note that early interventions are shown to work better than attempts to address deficits later in a child's educational career, and are often more cost effective (Foorman, Breier, & Fletcher, 2003; Hernandez, 2011; Torgesen, 2002). In an attempt to provide early interventions, schools and school systems invest a large amount of time and money to ameliorate reading difficulties.

There are many commercial early intervention programs available to address reading difficulties, targeting students in Kindergarten through Grade 3. The programs may involve extensive training for teachers, in addition to purchased materials, as is the case for Reading Recovery©. Other intervention programs are part of a basal or other textbook series, and still others are developed by companies to provide additional daily research-based reading instruction. A final option schools pursue is training classroom teachers to plan for and teach students reading intervention lessons, independent of a commercial program. As teachers are the main factor that impact student achievement, investing in time to train them in the use of research-based instructional strategies is the

most effective way to impact reading ability (Stronge, 2010). The purpose of this study was to explore the impact of training teachers to provide interventions through small group reading instruction.

Context of the Action Research Problem

The proposed study will take place in Rural County Elementary School (RCE), a small, rural school district located on the eastern portion of Virginia. The county, the district and the school face some unique problems and other ubiquitous problems, found throughout education. Understanding the unique context of RCE and Rural County Public Schools (RCPS) is critical to addressing the problems of practice addressed in this study.

Information related to the organization. Rural County Public Schools is a small, rural district in the eastern part of Virginia with approximately 1,250 students, 60% of whom qualify for free and reduced-price lunch. Reading achievement, as measured by passing the state's Standards of Learning (SOL) tests, is typically close to or above state average, in most cases at above 75% passing (VDOE, 2016a). The exception to this is third grade, where students pass the SOL between 70 and 75%, indicating a greater percentage of students are not reading on grade level (VDOE, 2016). RCE currently makes use of several reading intervention programs and strategies, to include Leveled Literacy Intervention (LLI), which is used to improve the reading level of students in the first through third grades and the use of a reading intervention teacher who provides additional small group reading instruction as an intervention (Heinemann, 2016b).

Demographics. The demographics of RCE reflect those of Rural County, with 19.7% of the population living in poverty and 60% of students qualifying for free and

reduced-price lunch. Community demographics show 30% of the population is Black or African American, 67% is White and 6.5% is of Hispanic ethnicity (US Census Bureau, 2016). On average the population is older than the rest of the state, with 19.5% over the age of 65 (US Census Bureau, 2016). Educational attainment in the county is low; 23% of adults having neither a high school diploma nor a GED, compared to 12% across the state.

Reading outcomes data. The Virginia Standards of Learning (SOL) assessments are used for federal and state accountability purposes. District level student achievement data has been generally strong when considering the community factors. Pass rates on state assessments are generally above state average, with 79% of all students passing the state reading test and 82% of all students passing the state math test (VDOE, 2016). At Rural County Elementary 78% of students passed the reading SOL in spring, which was an increase from the 68% pass rate the year before (VDOE, 2016). Further analysis of the trend data over the last seven years show declines and fluctuations over time. Table 1 provides more detailed information about the SOL reading pass rates at RCE.

Table 1

Rural County Elementary Reading Standards of Learning Pass Rates Over Time

	School Year							
Grade	09-10	10-11	11-12	12-13	13-14	14-15	15-16	Average
3	61	87	86	74	56	71	74	73
4	85	79	91	67	78	76	86	80
5	88	86	86	87	67	77	76	81

RCE administers the Phonological Awareness Literacy Screening (PALs), developed by the University of Virginia, to all students, K-2, in the fall, mid-year and spring (University of Virginia: Curry School of Education, 2016). There are established benchmarks for PALs in the fall and spring that students either meet, or do not meet, indicating their readiness for grade-level reading. While these data are not aggregated and reported for state or federal accountability, the school and central office assess the percentages of students not meeting the benchmarks in fall and spring for a variety of reasons to include planning for and providing student interventions, assessing the effectiveness of the general curriculum, and projecting student success on the state's SOL assessments. Table 2 shows the rates of students not meeting the PALs benchmark for the last six years. The identification rates in the spring of first grade are concerning, with the average of students identified in the fall almost identical in the spring. This increase in identified students is also seen in the fall semester of second grade, which has the highest rate of students not meeting the benchmark of any time students are measured.

Table 2

Rural County Elementary PALs[a] Identification Rates Over Time

	Testing Timeframe		
Year	K Spring	1 Spring	2 Spring
09-10	18	23	6
10-11	18	22	18
11-12	5	10	12
12-13	10	12	13
13-14	9	15	17
14-15	8	19	19
15-16	11	25	19

Note. [a] PALs = Phonological Awareness Literacy Screening

In addition to the SOL and PALs assessments, there are several other reading assessments used by the staff at RCE to inform reading instruction. Beginning in mid to late Kindergarten, students are given the Fountas and Pinnell Benchmark Assessment System, 2nd edition (BAS2), and continue to take it through fourth grade (Heinemann, 2016a). The purpose of BAS2 at RCE is to precisely determine students' instructional guided reading level. This assessment provides teachers with further diagnostic information about children, as students read aloud books in a one-to-one setting to the teacher, who codes their reading for errors and self-corrections. Teachers then have comprehension conversations with students about the book read and determine a fluency rate. Students in first and second grade also take the Developmental Spelling Analysis (DSA) to precisely determine their spelling stage (Ganske, 2014). Taken together, the information provided by PALs, BAS2, and DSA gives teachers a complete picture of students and their literacy ability.

***Reading program at RCE*.** The Rural County Elementary school improvement plan acts as the strategic plan for the building. The improvement plan's goals are related to improving reading achievement by providing instruction through a balanced literacy program which includes: shared reading, word study based on *Words Their Way* and guided reading following a Fountas and Pinnell model (Bear, Invernizzi, Templeton, & Johnston, 2008; Fountas & Pinnell, 1996). A second goal is related to improving achievement of students reading below grade level by providing targeted interventions in reading with the classroom teacher. In order to implement the balanced literacy program, extensive professional development has been offered in the components of reading instruction, with training, observing and coaching being provided to teachers. Reading

interventions provided by classroom teachers have been through the Leveled Literacy Intervention program, a commercial, supplemental guided reading program developed with input from Fountas and Pinnell and published by Heinemann (Heinemann, 2016b). The district's strategic plan includes an unmet goal of 100% of students passing the reading SOL by 2015, in addition to an also unmet goal of 100% of students meeting the spring PALs benchmark by 2015, in Kindergarten through third grade. The school's balanced literacy model and strategic reading interventions are necessarily linked to the district's goal of improved reading assessment outcomes.

RCE implements a Multiple Tiered System of Supports (MTSS) model for reading and math. In a MTSS model all students receive Tier I general instruction, provided by a general education teacher; targeted students who are not progressing with Tier I instruction, as identified by assessment data, will also receive Tier II and/or Tier III instruction in progressively more intense settings (VDOE, 2013). At RCE, Tier I balanced literacy instruction occurs daily during a 120-minute block, with additional time scheduled for the provision of reading and math interventions for Tier II and Tier III students. Teachers develop daily Tier I lesson plans reflecting each of the balanced literacy components, with a wide variety of materials for guided reading and word study available to all staff. Additionally classroom libraries have been purchased for each teacher in the building to support this initiative. Training has been provided to teachers through the use of consultants who covered the main components of balanced literacy, word study, guided reading and briefly writing. As follow up, consultants observed teachers in each of these areas and provided feedback and coaching. This model was followed for three years with two different consultants.

For some students, this Tier I instruction does not provide enough time and support to make progress toward grade level reading. These students who are not reading on grade level are further divided into two groups which receive additional reading instruction beyond 120 minutes: Tier II and Tier III. Students identified as Tier II are closer to reading on grade level than those in Tier III. Tier II students receive additional small group reading instruction for 30 minutes per day in groups of less than 5, which is typically provided by teachers during a separate intervention block called Intervention/Enrichment or I/E. Tier II students in grades 1 through 3 participate in LLI for reading intervention. Tier III students require more intense interventions to be successful, with a greater duration, in smaller groups, provided by the most expert teachers in reading instruction (VDOE, 2013). At RCE, Tier III students receive intervention instruction with the reading specialist or special education teachers. The goal of identifying students not reading on grade level is to provide them with interventions to improve reading ability and increase the chances these students will be successful on the state's summative reading SOL assessment.

Information related to the intended stakeholders. The professional development program being studied is intended to assist teachers in improving their strategies for teaching reading and to improve student reading outcomes. Students and teachers should ultimately benefit from this action research study.

Needs addressed. While SOL reading results have improved over the last two years at RCE, this is due in large part to a change in state policy allowing students who fail an initial test attempt to retake the assessment, resulting in an increased number of passing students. PALs results show an increase in the numbers of students not meeting

benchmark and reading below grade level. In an attempt to increase the numbers of student reading on grade level the school has implemented the commercial scripted reading intervention program LLI, with limited success. After consulting with an expert in reading instruction, a different strategy was developed to provide intervention to students in grades K-2 (personal communication, S. Thacker-Gwaltney, May 9, 2016). As an alternative program to scripted reading interventions, the school and district instead will target two teachers per grade level to participate in professional development on planning and providing small group reading intervention for Tier II students. These teachers will provide reading intervention lessons during the intervention block to identified Tier II students.

Teachers will participate in professional development led by a contracted expert in providing small group differentiated reading instruction for struggling readers. The goals for the training are to: increase the number of instructional strategies teachers use with beginning, emergent and transitional readers; implement a data-based planning process to address student weaknesses; increase collegial interactions related to planning and delivering reading instruction; and increase teacher efficacy in providing reading instruction. Teachers will participate in a day-long session which will cover instructional strategies addressing the balanced literacy needs of students classified as emergent, beginning or transitional readers, to include phonological awareness, fluency and guided reading. In a second day-long session, teachers will continue to learn additional strategies related to sight word instruction and will watch four 30 minute lessons delivered to student groups by the reading expert. After the second session teachers will plan small group instruction for emergent and beginning readers and send these plans to the

instructor for feedback. During the third and subsequent half-day sessions teachers will take turns presenting and observing each other's planned lessons. Then teachers will debrief about the lessons and work together to improve their instruction. It is this type of active professional development where teachers have the opportunity to "observe and be observed teaching; to plan classroom implementation…to review student work; and to present, lead and write" that is most impactful in changing teacher practices (Birman et al., 2000, p. 31).

An additional goal of the training is to improve teacher self-efficacy. Research has shown that teacher self-efficacy beliefs have an impact on student literacy achievement. As literacy has been identified as an important issue by governments for years, studies have been carried out for years. In the 70s, the RAND study was conducted on low income minority students found the greater a teacher's feelings of efficacy, the greater their students' reading achievement (Armor et al., 1976). However the study did not provide information related to increasing teachers' feelings of efficacy. Further research has shown that in-service teachers' efficacy beliefs can be positively impacted by training or professional development, with great impact from provision of "authentic" mastery experiences, with specific feedback (Tschannen-Moran & McMaster, 2009, p. 240). Pre-service teachers participating in observations of master teachers, representing a vicarious experience also showed an increase in their feelings of self-efficacy (Johnson, 2010). Teachers of struggling readers must persist in identifying and ameliorating reading difficulties, which is a complex and difficult task; those teachers with greater self-efficacy beliefs are more likely to continue their efforts (Tschannen-Moran & Johnson,

2011). Improved self-efficacy beliefs may be an overlooked, but important component to improving reading outcomes at RCE.

Theoretical Framework

The study was designed to examine the implementation and initial results of teacher small group reading interventions, seeking to not only improve reading instruction, but also to assess teacher efficacy and to inform the district's future decisions about professional development methods used to establish new pedagogy. This study was best addressed through the pragmatic worldview, focusing on examining a variety of data, applying it to the problem and developing solutions (Mertens & Wilson, 2012). The pragmatic paradigm is not only focused on using results to improve outcomes and institutions, but also supports the use of a mixed methods approach in data collection, allowing for the researcher to match data collection procedures to the purpose of their study, using both qualitative and quantitative data (Mertens & Wilson, 2012, p. 91). Mixed methods offered a more complete picture of the professional development for reading intervention results and also its impact on the teachers. Additionally, this mixed methods approach allows for data triangulation, increasing the validity of the study (Craig, 2009).

Action Research Questions

The purpose of this study is to inform district leadership about: the impact of teacher planned and delivered reading interventions on student reading outcomes; programs that may increase teachers' feelings of efficacy; and the most effective ways to support teachers in learning a new practice.

1) To what degree do teacher planned and delivered small group reading interventions impact reading outcomes of Tier I and Tier II students, as measured by benchmark assessments?
2) To what degree are teachers' feelings of efficacy influenced by participation in professional development designed based on research-based principles of effectiveness?

The first research question will provide information about how students' reading abilities are impacted by teacher-provided small group reading interventions. While PALs is given periodically, more precise information about student guiding reading level is gathered through the administration of the Fountas and Pinnell Benchmark Assessment System 2nd edition, with guided reading levels being monitored through administration of running records using benchmark passages once a month.

The second research question is focused on the impact of training, which is related to the provision of teacher planned and administered reading interventions, on efficacy through peer collaboration. Data related to this question will be gathered through the use of the Teachers' Sense of Efficacy for Literacy Instruction (TSELI) survey instrument developed by Tschannen-Moran and Johnson (2011), and interviews of teachers after the process.

Action Research Model

The action research model followed for this study is Mertler's (2017) model which included four stages: planning, acting, developing, reflecting. The goal of any action research study should be to address a problem of practice, and this model fits into the school's current cyclical school improvement model: plan, do, study, act.

Additionally, as I will be acting as a participant in the professional development, the study will be a participatory action research (PAR).

Description of the Intervention

Teachers will participate in professional development which is designed based on those principles shown to be effective through research. Several research studies have emphasized the importance of active learning for teachers to include: job-embeddedness; "to observe and be observed" (Birman et al., 2000, p. 31); and follow up experiences (Bevins, Jordan, & Perry, 2011; Guskey, 2009). The experiences offered in training are not only aligned with research based best practices for professional development, but are also aligned with Bandura's (1997) four factors that influence feelings of self-efficacy: verbal persuasion, physiological arousal, and vicarious and mastery experiences. Table 3 provides an overview of the professional development as planned for teachers.

Table 3

Small Group Differentiated Instruction Literacy Professional Development

Session	Overview of topics covered	Activities for teachers
1- Oct 27	Stages of reading development: emergent, beginning and transitional Lesson plan structure for 3 stages of development, including focus area for each lesson Instructional activities for each lesson plan component, for each stage of development, focusing on phonological awareness activities	Listen to overview presentation Participate in making classroom materials under the guidance of the consultant Participate in modeled activities in which students engage Asked to try a new strategy before next meeting
2- Nov 10	Present additional instruction activities for lesson plan components with a focus on sight words Review stages of reading development and lesson plan structure Share experiences with each other related to new strategy tried over the previous two weeks Using PALs data to plan lessons and define groups	Watch instructor teach 25 to 30 minute small group lesson for early emergent, emergent, beginning and transitional readers; debrief about strengths and weaknesses of lesson Work with instructor to plan lessons for next two weeks Asked to submit the plan to be taught on Nov 30 by Nov 27 for feedback
3- Nov 30 4- Dec 14 5- Jan 12 6- Jan 26	Half-day- review lesson plans and instructional strategies for three early stages of reading	Teachers instruct small group and are observed by peer partner and reading intervention teacher; teachers provide each other feedback on what worked and did not work Teachers plan together for next week to address areas highlighted in student data

Teachers at RCE have participated in training to deliver small group instruction and interventions through contracting with Heinemann and using LLI.

Table 4 provides a comparison of the training provided previously and the intervention being studied.

Table 4

Comparison of Professional Development for Small Group Intervention Instruction

Feature	Previous PD	Current PD
Total hours	14	24
Follow up observations	Yes	Yes
Active learning to include job-embedded component	No	Yes
Includes a vicarious experience	Yes	Yes
Includes a mastery experience	No	Yes
Includes verbal persuasion	No	Yes
Includes content and pedagogical knowledge	Yes	Yes
Aligned with school/district goals (coherence)	Yes	Yes

Definitions of Terms

Balanced Literacy- method of literacy instruction that includes multiple components: read alouds, shared reading, guided reading, independent reading, modeled writing, shared writing, independent writing and word study. This is the method of literacy instruction RCE implements.

Fountas and Pinnell Benchmark Assessment System 2nd Edition (BAS2)- an assessment used to determine independent and instructional reading level using carefully leveled fiction and non-fiction texts. Teachers administer the texts as running records, marking

and interpreting student errors, establishing word per minute reading rate, and assessing comprehension through follow-up comprehension conversations.

Guided Reading- a method of reading instruction where students participate in small, teacher led groups reading text that is aligned with their instructional reading level; teachers explicitly teach reading strategies aligned with student needs (Fountas & Pinnell, 2001).

Leveled Texts- texts which have been assessed for difficulty and are assigned a label, also known as a level. There are various leveling systems to include: Lexile levels, DRA and Guided Reading levels. RCE uses the Guided Reading system, which assigns books a letter, A to Z, based on text complexity.

LLI- Leveled Literacy Intervention- a scripted reading intervention program developed by Fountas and Pinnell, based on the guided reading framework and published by Heinemann.

MTSS- Multiple Tier System of Supports- model for providing students with support in academics and behavior through an early intervention model; the goal is reduce the number of students identified as needing special education services.

PALs- Phonological Awareness Literacy Screening- developed by University of Virginia (UVA) to assess student readiness to read; given to all students in K-2 in the fall and spring. Students receive a summed score that is compared to a benchmark; students either meet or do not meet the benchmark.

Running Records- individual assessment of students' oral reading of instructional level text; teachers record accuracy of words read, along with errors made to inform reading instruction.

SOL- Standard of Learning- Standards developed for content areas by the Virginia Department of Education. These standards are assessed annually through SOL tests for students in Grades 3-8 and End of Course high school classes. The SOL tests are part of the state and federal accountability system.

CHAPTER 2

REVIEW OF RELATED LITERATURE

A review of literature related to the problem of providing effective small group literacy instruction yields a tremendous amount of information. The most pertinent information relating to the problem faced by RCE is related to several themes: reading instruction and research based components; early reading interventions; effective professional development for teachers; and teacher self-efficacy beliefs.

Reading Instruction

Ensuring students attain grade level reading proficiency is a critical goal of any school, but especially Rural County Elementary. Teachers strive to provide the best instruction to all students; however for a variety of reasons some students are not able to attain proficiency at the same rates as their peers. Many factors influence student reading ability in early grades to include: mother's educational level; socioeconomic status; time spent in reading activities before entering school; teacher knowledge and training; and class sizes under 20 (Allington, 2006; Cockrum & Shanker, 2013; Foorman, York, Santi, & Francis, 2007). It is up to teachers to provide the individualized instruction necessary to correct the deficits created by negative student factors. Further research indicates that reading difficulties take less time and intensity to correct when students are younger, making early reading intervention a critical function for schools and teachers to provide (Torgesen, 2002). The unfortunate fact is that students who struggle with reading in first

grade are typically unable to acquire grade level reading skills by the end of their elementary years (Torgesen, 2002). It is critical for schools and teachers to provide the type of interventions that will allow all students to become successful grade level readers.

Components of Literacy Instruction. The National Reading Panel (NRP) examined over 100,000 studies on reading instruction in order to develop recommendations to the educational community that guide reading instruction today (Armbruster et al., 2001, p. i). The panel advocated for explicit literacy instruction in five areas: phonemic awareness, phonics, vocabulary, fluency and comprehension. While the initial number of studies selected for review was quite large, after those studies were excluded that did not meet the standards set by the reading panel, there were far fewer which supported the recommendations in the report; for example only 38 studies made up the basis for the phonics subgroup report (Garan, 2001, p. 501). Typically younger students receive instruction in phonemic awareness and phonics, providing them with the skills to decode and read fluently; as students advance, their literacy instruction consists of greater time spent working on comprehension and vocabulary. A student having difficulties in any area of reading instruction is likely to struggle with reading and comprehending grade level material. As students age, it can become more challenging to identify the root cause of the problem because gaps in learning become so great it is hard to pinpoint which area of literacy instruction is causing the problem, making early identification of reading difficulties more critical. Understanding these five pillars of literacy instruction is the foundation for effective instruction and interventions.

Phonemic awareness. The earliest literacy experiences are not related to print, but rather to hearing the spoken word. Children must be able to discriminate spoken

language into words, and further discriminate the smallest part of sounds in those words called phonemes (Armbruster et al., 2001; Cockrum & Shanker, 2013). Students who have a strong phonemic awareness not only hear the sounds in words, but can also "manipulate these sounds" (Cockrum & Shanker, 2013, p. 3) through blending, adding and deleting phonemes, among other tasks (Armbruster et al., 2001). Phonemic awareness is a foundational ability that improves reading comprehension, word reading and spelling, and is more related to learning to read than many other factors (Cockrum & Shanker, 2013).

Students at RCE are taught phonemic awareness with a variety of strategies. In Kindergarten, phonemic awareness activities are taught in both whole group and small group. Students engage in phonemic awareness activities during their morning meeting circle time, with teachers following the curriculum developed by Adams, Foorman, Lundberg, and Beeler (1997). During small group differentiated instruction, teachers provide scaffolded phonemic awareness activities, as indicated by student data. For example, during a rhyming activity, targeted students may have three to four sample pictures and be asked to point to one that rhymes with a word spoken by the teacher.

Phonics. Phonics instruction is a hotly contested area of reading instruction, with politicians, parents, textbook companies and others espousing the benefits of using either the whole language or phonics method of reading instruction. The reality is that phonics is a key component of balanced literacy instruction (Armbruster et al., 2001; Bear et al., 2008; Cockrum & Shanker, 2013; Fountas & Pinnell, 1996; Tyner, 2007). Phonics is understanding the relationship between sounds (phonemes) and letters (graphemes), and is the basis for the ability to decode words (Armbruster et al., 2001; Bear et al., 2008).

Typically younger students in Kindergarten through second grade benefit the most from explicit phonics instruction.

Phonics instruction at RCE is differentiated and provided mainly during small group differentiated instruction through word study, using the progression found in *Words Their Way*, which begins with the emergent state, focusing on alphabet knowledge and concept of word, then letter-name-alphabetic, within word, syllable and affixes and finally the derivational relations stage (Bear et al., 2008). Providing word study through small group ensures that students receive instruction in their area of need, and that important alphabet knowledge and spelling patterns are not missed (Tyner, 2007). While there are advocates for providing separate word study groups, for the majority of students, spelling development mirrors reading development, forming the basis for including word study as part of small group differentiated reading instruction (Bear et al., 2008, p. 19; Tyner, 2007). Students continue to practice word study concepts throughout the week as part of independent centers, once teachers are sure the features are understood. Teachers base their word study instruction on the DSA, rather than the assessments found in *Words Their Way* or on the information PALs provides, because of the detailed information the DSA provides, when interpreted correctly (Ganske, 2014).

Fluency. Fluent readers are able to read material at an appropriate rate, with expression and few errors, allowing them to focus on the meaning of the text. A fluent reader will not have to stop and decode many words and can self-correct when needed. Readers' fluency will change with the difficulty of the passage and familiarity with the content. Fluency is measured in words correct per minute (WCPM) and there are various charts available relating WCPM to grade level expectations (Armbruster et al., 2001;

Cockrum & Shanker, 2013). Younger children typically read aloud from familiar texts to improve fluency while older students are encouraged to read a variety of texts silently. Fluency is also used as an indicator of comprehension in a variety of assessments.

Fluency is a key to success on statewide summative assessments, as the length of reading passages makes it critical for students to read quickly enough to process the content, rather than focusing mainly on decoding (personal communication, L. Meyers, August 16, 2016). Ensuring that students are fluent at the appropriate grade level target is a focus for students and teachers at RCE. As part of small group instruction and independent work, students re-read familiar text, which is crucial for building fluency (Tyner, 2007). Further, students read text only versions of books and poetry and participate in reader's theater, which provides opportunities to practice their expression and automaticity (Tyner, 2007).

Vocabulary. Students with vocabulary knowledge have an understanding of what the words they are reading mean; a lack of vocabulary knowledge can result in poor text comprehension. Students can build their vocabulary either directly, through explicit instruction, or indirectly, through a wide variety of reading and listening to others with developed vocabularies. There are numerous strategies for direct instruction, to include repeated exposure to targeted words and their meanings as well as learning word roots, pre-fixes and suffixes (Armbruster et al., 2001).

Vocabulary is best built through reading a wide variety of material, and is also explicitly taught through several means at RCE (Allington, 2006). Students work on vocabulary during whole group instruction with word walls, read-alouds and shared reading. During small group time vocabulary is built by focusing on building a sight

word bank; these words are gathered through reading and re-reading texts, with explicit instruction in their meaning and spelling by the teacher (Tyner, 2007). Further, struggling readers are taught using Richardson's (2016) four step sight word method. Initially the focus is on the Frye sight word list in Kindergarten and first grade (personal communication, E. Beard, October 27, 2016).

Comprehension. The reason for reading is comprehension, or understanding the meaning of what one has read. Readers with good comprehension engage with text and monitor their own understanding, and have skills to help themselves understand what is not initially understood. There are variety of skills and strategies that strong readers use subconsciously which can be explicitly taught to those students who struggle with comprehension (Armbruster et al., 2001). If the words in a text are too difficult to decode, or too many meanings are not understood, or there is a lack of background knowledge, it is likely that a reader will have limited comprehension of the content of the passage.

Both whole group and small group differentiated instruction is used to help readers build comprehension strategies at RCE. Students encounter grade level content through read alouds and other shared reading experiences with the whole class. Six comprehension strategies, based on the text *Teaching Comprehension to Enhance Understanding* are taught: making connections; asking questions; visualizing; determining text importance (i.e., compare and contrast ideas, discern themes, summarize, cause and effect); making inferences; and synthesizing (Harvey & Goudvis, 2000). During small group differentiated instruction, students are given books to read that are aligned with their instructional level and developmental reading stage. Teachers follow a Fountas and Pinnell model for introducing the text and building background

knowledge, along with providing comprehension assistance during and after reading (Fountas & Pinnell, 2001). This new reading occurs at the end of small group time. Students also complete independent comprehension work by writing about their reading in their reading journals.

Balanced Literacy. While there are a variety of approaches for teaching the five pillars of literacy instruction, the model used by RCE is balanced literacy. The components of balanced literacy include: shared reading, read aloud, interactive reading, guided reading, independent reading, shared writing, interactive writing, guided writing, independent writing and word study (Fountas & Pinnell, 2006). The balanced approach to literacy instruction allows for whole group, small group and individual instruction (Fountas & Pinnell, 2006). The small group instructional component is where teachers work with students in homogenous groups, formed using student assessment data, providing students explicit instruction in areas of need (Fountas & Pinnell, 2006; Tyner, 2007).

Differentiated, small group reading instruction. Students participating in differentiated, small group reading should experience literacy instruction based on their identified needs. One way to align instruction with need is based on the students' stages of reading development. While the five pillars of literacy instruction are critical to student success, not all readers need instruction in all five areas at the same time, or with the same emphasis. It is important to match instruction with one of the five stages of reading development children experience: emergent; beginning; transitional; intermediate and advanced (Bear et al., 2008; Tyner, 2007). Each of these stages has characteristic needs

on which the small group literacy instruction should focus. Table 5 provides information about each stage and the requirements for instruction.

Table 5

Stages of Reading Development

Stage	Guided Reading Level	Instructional Focus
Emergent	A through C	phonological awareness; alphabet; concept of word
Beginning	C through I	phonics; fluency; comprehension
Transitional	I through P	fluency; vocabulary; comprehension
Intermediate	P through Y	fluency; vocabulary; comprehension
Advanced	Z	fluency; vocabulary; comprehension

Students at RCE in the emergent, beginning and transitional stages of reading development typically participate in small group differentiated instruction for twenty-five to thirty minutes per day. Small group differentiated reading instruction is more than simply small group guided reading. It includes opportunities for students to participate in: differentiated, systematic word study; interactive and independent writing; building sight word vocabulary; using leveled text to practice decoding and comprehension strategies, and allows the teacher to assess students informally (Tyner, 2007). Small group differentiated instruction also allows teachers to provide explicit phonological awareness instruction to students in the emergent stage of reading (personal communication, E. Beard, October 27, 2016). Table 6 provides more detailed information about the components of small group reading instruction.

Table 6

Components of Small Group Reading Instruction

	Emergent	Beginning	Transitional
Plan Focus	Phonological awareness, alphabet, concept of word	Phonemic awareness, phonics and word identification	Fluency, vocabulary and comprehension
Phonological Awareness	Listening and rhyming; alliteration; syllable and word awareness; onsets and rimes	Blend and segment onset-rime and phonemes; manipulate phonemes	Mastered and no longer required
Phonics and Sight Words	Identify letter names; letter sounds; write letters; master a few sight words	Letter sounds, diagraphs and blends, short vowels in CVC words; sight words; decoding strategies; dictated sentences for phonics and sight words	Long vowel patterns in single syllable words; identify multisyllabic words; sight words
Fluency	Memorize simple texts and track accurately; re-read simple texts	Re-read text 3 to 5 times; text only versions of books; poetry to build expression and phrasing	Accuracy and phrasing through re-reading, poetry and readers theater
Vocabulary and Comprehension	Oral language focus; vocabulary and comprehension through read alouds and discussion	New vocabulary through read aloud and discussion; teacher models comprehension strategies and graphic organizers	Read alouds to model strategies; apply strategies during guided reading
Guided Reading and Writing	Echo and choral reading; accurate tracking of predictable texts; providing lines to anchor writing	Introduce and read new book; word identification skills; oral retellings; frame writing	Practice and apply taught comprehension strategies; written responses for summaries and graphic organizers

Early Reading Intervention

Not all students have the foundational skills to read fluently and comprehend text presented on grade level. The interplay among the five main elements of literacy instruction make it critical to determine the earliest point in reading development which the break down is occurring, by reading stage. If children do not have a firm concept of word, then their small group instruction should be aligned with the needs of emergent readers. In older children, what presents as poor fluency and comprehension may actually be related to a gap in a much earlier stage of reading instruction. To assist struggling readers, areas of weakness must be identified and targeted instruction planned and delivered to the students. It is this type of early intervention that is necessary to close reading gaps in young children, before they reach the upper grade levels when addressing the problem is much more costly and time consuming (Foorman et al., 2007).

The provision of reading interventions can come through a purchased, scripted program, or through teacher planned and delivered small group interventions. While many programs make use of a variety of interventions for reading, teachers may also select and use an assortment of strategies with struggling readers, targeted to the five areas of literacy instruction. The first step to determining interventions is to evaluate student strength and weaknesses with a diagnostic assessment like PALs or BAS2. Once a student's stage of reading development has been determined, the appropriate small group differentiated instructional plan and activities are selected; these plans are designed to provide instruction in areas indicated by student development.

Effective Professional Development

If teacher practices and beliefs are going to be changed, effective learning experiences are necessary. While there have been a number of studies on the necessary components of effective professional development, for a variety of reasons a simple panacea leading to improved instructional practices and student outcomes has not been identified (Birman et al., 2000; Guskey, 2003; Guskey & Yoon, 2009). As educational leaders seek to provide effective professional development in literacy instruction, it is critical that the programs developed align with the practices that have been identified as effective in changing classroom practice and improving student achievement.

There are several reasons why no one set of quality characteristics can be developed as a defining road map for quality professional development. The first issue is related to the definition of "effective" professional development (Guskey, 2003). How is effective measured? Is it through self-reported measures of teachers' acceptance of the experience, through changes in practice, or through student achievement results (Guskey, 2003)? Second, context is critical in defining effective professional development (Guskey, 2009; Guskey & Yoon, 2009). Each school's context is distinctive and the professional development deployed must be equally unique to fit the needs of teachers and students (Guskey, 2003). A final critical factor is the quality of the training provided for the teachers. Almost every characteristic used to define effective professional development can be qualified with a "but" statement (Guskey, 2003). For example, an appropriate amount of time for training is necessary, but not if the activities are poor in nature; more time spent engaged in poor quality activities will not improve teacher practice or student outcomes.

While the list of quality characteristics of professional development cannot be simplistically defined, there are elements, when implemented in a quality manner, that have been shown to improve student achievement and teacher practice (Birman et al., 2000; Guskey, 2003; Guskey & Yoon, 2009).

Time. Professional development activities must be of "appropriate duration," but how the time is used is critical to improving student outcomes (Birman et al., 2000, p. 30). Kennedy (1998) found that while time spent in professional development went from five to over 100 hours, teachers who spent 30 or more hours had the most positive results. If the activities in which teachers are participating are poorly planned or are poor in quality, additional time spent engaging in bad experiences will not improve student achievement. However, the much-maligned traditional workshops have been found effective in some studies, if the focus is on "research-based instructional practices," involve "active-learning experiences for participants," and provide "teachers with opportunities to adapt the practice to their unique classroom situations" (Guskey & Yoon, 2009, p. 496). It appears that the quality of time spent is equal to and even more important to the quantity of time engaged with professional learning.

Active Learning. Birman et al. (2000) emphasize the importance of active learning for teachers, where teachers have the opportunity to "observe and be observed teaching; to plan classroom implementation…to review student work; and to present, lead, and write" (p. 31). Including active learning for teachers as part of a plan for professional development allows for the inclusion of other practices supported by research to include: follow-up experiences, job-embeddedness, and even action research (Bevins et al., 2011; Guskey, 2009). Active learning experiences have the potential to

assist teachers in: addressing implementation issues that may arise when making complex changes to instruction; allowing them to work through issues unique to particular contexts; and addressing the need for professional development to be ongoing and "procedurally embedded" (Guskey, 1997, p. 6). Providing job-embedded active learning in literacy instruction can take many forms, but could easily be offered in the form of observation and coaching by a literacy coach, reading specialist or peers, making this a potentially very important component of literacy professional development.

Content. Stronge (2010) emphasizes the importance of teacher content and pedagogical knowledge on student achievement through extensive studies of available research; the greater teacher content knowledge and pedagogical knowledge, the greater student achievement. There is also an emphasis on the importance of professional development addressing both content knowledge and teacher pedagogy (Birman et al., 2000; Guskey & Yoon, 2009). Teacher knowledge and skills increased when the trainings they attended were related to a single content area and teaching strategies related to that area, rather than when engaged in learning about "general teaching methods, such as lesson planning or grouping methods" (Birman et al., 2000, p. 30). In fact, in a study of 13 lists of qualities of effective professional development, the "most frequently mentioned characteristic…is enhancement of teachers' content and pedagogic knowledge" (Guskey, 2003, p. 9). In light of this, any professional development activities should seek to build teachers' content and pedagogical knowledge.

Collective Participation. Effective implementation of research-based instructional strategies necessarily requires the participation of all the instructional personnel in a building. This component of training allows for engaging in more active

learning opportunities, supporting the procedural nature of job-embedded professional development (Birman et al., 2000; Guskey, 1997). Teachers working together in the same building are better able to discuss challenges that arise related to their particular context, and to discuss and identify practices that work well in a particular implementation, building a strong "learning community" (Birman et al., 2000). However, there is also the potential for collaborating professionals to work together to create barriers to implementation and to rely instead on prior practices identified as "good" in the building, rather than working through the difficulties associated with implementing complex, research-based instructional strategies (Guskey, 2003; Guskey & Yoon, 2009). Collaboration should be used as a part of effective professional development, but may be more effective when modeled and coached by an individual who is able to focus teachers on effective collaboration.

Coherence. A final important element for any professional development is alignment with district, state and national standards, as well as a connection to a greater vision (Birman et al., 2000; Guskey, 1997). Professional development activities should be part of a greater plan, where connections to school, district and larger goals are clear; this prevents the feeling that professional development is a disjointed experience not related to actual classroom instruction (Birman et al., 2000). Research also indicates that when professional development is a "coherent part of a wider set of opportunities for teacher learning and development," there is an increase in teacher learning and improvement in classroom practice (Birman et al., 2000, p. 31). When a larger change is broken down into smaller pieces and tied to a larger vision, teachers are better able to implement the changes as intended without developing a "coping strategy that distorts the change"

(Guskey, 1997, p. 6). Ensuring that all professional development experiences are aligned with standards, goals and a common vision supports teachers' efforts, improving the ultimate outcome: change in practice and increased student achievement.

Literacy Professional Development

The federal government entered the fray of literacy instruction with the establishment of Reading First and Early Reading First initiatives, both established as part of the No Child Left Behind Act of 2001 (Neuman & Cunningham, 2009). These two programs tied funding to extensive professional development in literacy instruction for schools across the country. School systems receiving grant money from these programs agreed to implement scientifically-based reading programs in Kindergarten through third grade, including a formative diagnostic assessment component and extensive professional development targeted at classroom instruction (United States Department of Education [USDOE], 2014). The training provided through the grants was meant to increase teachers' knowledge of literacy instruction and to make use of "coaches, mentors, peers and outside experts" who would provide feedback to teachers implementing new literacy concepts in the classroom (USED, 2002, p. 7). While there has not been extensive research into the impact of teachers having increased content knowledge on student achievement in reading, there are indications that there are positive impacts on student learning (Neuman & Cunningham, 2009; Stronge, 2010). However pedagogical knowledge is more stable over time and has been shown to have an impact on student achievement as well (Neuman & Cunningham, 2009; Stronge, 2010). The available research supports a combined approach to professional development: building content and pedagogical knowledge of literacy instruction.

Literacy Coaches. In recent years there has been greater use of practice-based professional development through coaches, especially in the area of literacy instruction (Carlisle, Cortina, & Katz, 2011; Neuman & Cunningham, 2009; Stephens et al., 2011; Vanderburg & Stephens, 2010). Literacy coaches can provide a critical link between the theory presented in workshops or college level content classes and the realities of implementing this knowledge into classroom practice (Neuman & Cunningham, 2009). Coaches generally work with teachers in the classroom, providing model lessons, observations of teacher practice, assistance in planning for instruction and effective use of student level data. They can also assist with fostering teacher collaboration and increasing knowledge of research-based teaching practices through the provision of study groups, although the degree to which coaches are able to facilitate collaboration is an area for further research (Carlisle et al., 2011; Stephens et al., 2011; Vanderburg & Stephens, 2010).

There have been several studies on the impact of literacy coaches on teacher practice. Two of these involved different groups of researchers examining data from the South Carolina Reading Initiative (SCRI), which made extensive use of literacy coaches across the state (Stephens et al., 2011; Vanderburg & Stephens, 2010). These studies supported the impact of coaches on teachers in a variety of positive ways including: fostering a greater sense of collegiality, increasing knowledge of students through improved data collection, increasing teacher exposure to research-based strategies, augmenting teachers' willingness to take instructional risks and try new things, and engendering a desire in teachers to read and attempt to implement research-based literacy instructional practices (Carlisle et al., 2011; Vanderburg & Stephens, 2010). One of the

most beneficial components to this professional development model, as reported by teachers, was the time teachers were able to spend talking with each other and the coach and the empowerment to try new instructional strategies in their classrooms (Vanderburg & Stephens, 2010).

The use of literacy coaches as part of a comprehensive professional development program can support changes to literacy instruction in the classroom. Hattie (2009) found that formative feedback to teachers about their instruction helps improve student achievement, with an effect size of .9. Coaches can offer teachers exactly this type of non-evaluative feedback on their instruction, as well as facilitating improved knowledge of research-based instruction through structured study groups, in other words providing active learning through collaboration. If coaches are part of well-planned professional development, are supported in their endeavors by others, and are used to provide feedback on literacy instruction, the dividends in the classroom could be great.

Efficacy

Bandura (1993) states "efficacy beliefs influence how people feel, think, motivate themselves, and behave" (p. 118). Individuals with a greater sense of self-efficacy are more likely to persist in difficult tasks, as they envision themselves as successful, while those with lower feelings of self-efficacy anticipate that they will fail at a difficult task (Bandura, 1993). For teachers, these self-efficacy beliefs have been shown to impact instruction. Teachers with higher efficacy beliefs have been shown to persist in working with difficult students, showing resilience when encountering failure, believing they can impact learning (Corkett, Hatt & Benevides, 2011; Gibson & Dembo, 1984; Takahashi, 2011). However K. F. Wheatley (2005) questions teachers' feelings of self-efficacy, for

example, novice teachers with greater feelings of efficacy are likely to continue with their current practices, which may or may not be effective. Some amount of self-doubt may encourage teachers to explore other teaching strategies; when teachers feel confident in their abilities they may be less likely to make changes, especially when the change is a difficult one (K.F.Wheatley, 2005).

Teacher feelings of self-efficacy are impacted by context (school climate, administrative support, resources) and subject (teaching Algebra versus teaching reading) (Johnson, 2010; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). There have been studies which seek to link teacher self-efficacy beliefs to student achievement in a specific area like literacy. For example, the RAND study also showed a relationship between those teachers with a greater sense of self-efficacy and their students, who had a greater literacy achievement (Armor et al., 1976). Working with struggling readers is a challenging task which will necessarily have set backs and will require a great amount of persistence. Assessing teachers' feelings of self-efficacy should be a component of professional development, due to the potential impact on instruction and student achievement.

Impacting Teacher Self-Efficacy Beliefs Through Professional Development

Teachers' self-efficacy beliefs are impacted by four factors: vicarious experiences, verbal persuasion, physiological arousal and mastery experiences (Bandura, 1997). For teachers, these four factors may be experienced through professional development or other training. Vicarious experiences are encountered when a teacher observes a modeled lesson; verbal persuasion is related to the verbal feedback received about his or her performance; and physiological responses occur when there are physical

and emotional reactions to teaching lessons. Perhaps the most impactful factor on teacher efficacy beliefs is the mastery experience, which occurs when a teacher provides instruction to a student and observes improvement as a result of that instruction (Tschannen-Moran & Johnson, 2011; Tschannen-Moran & McMaster, 2009).

Carefully crafted professional development could provide all four experiences, increasing the likelihood that a teacher would have improved feelings of efficacy, and therefore persist in working with struggling readers. Timperley and Phillips (2003) found that teachers who participated in training on effective literacy strategies, and then experienced a positive impact on student achievement also had increased efficacy. Student achievement in literacy and teacher efficacy beliefs are very likely interrelated; working to improve teacher efficacy will also likely result in improved student results and vice versa.

There are other factors shown to impact teacher feelings of efficacy in literacy instruction. The type of preparation teachers complete can result in greater feelings of efficacy, for example those teachers who participated in a reading specialist program were more likely to try different teaching methods than those who graduated from a more general program (Tschannen-Moran & Johnson, 2011). Takahashi (2011) found that teachers participating in a community of practice, examining student work, and making evidence based decisions fostered strong self-efficacy beliefs, as they were "co-constructed" (p. 739). Teachers exposed to a new literacy strategy through modeling show a reduction in their self-efficacy, however the impact is reversed with the addition of follow-up coaching (Tschannen-Moran & Johnson, 2011).

Summary

While there are a variety of types of learning in which teachers participate, some elements are better than others at fostering instructional change in the classroom and improved student outcomes. A multi-faceted approach aligned with standards, goals and a great vision is critical for success. Beginning with up front time spent building teachers' content and pedagogical knowledge is a critical starting point. Continuing with well-planned active learning experiences throughout the year is also critical for teachers to change their practice. These active learning experiences could include the use of coaches who observe and provide formative feedback on teaching and time for collaboration with peers in developing lessons and problem-solving implementation difficulties, both of which would help bridge the divide between theoretical knowledge and practice in the classroom.

Grade level reading by the end of third grade is critical for a number of reasons, not the least of which are post-secondary outcomes. When caught early, difficulties with reading can be corrected more easily and quickly, which is the goal of early reading intervention. Teachers, however, are often unprepared to provide small group reading intervention and should receive job-embedded professional development to assist them in providing this critical instruction. If properly trained in identifying student needs and providing interventions, teachers' self-efficacy beliefs may also be impacted. The combination of better training and altered self-efficacy could improve student reading achievement, increasing the chances of grade level reading and success in high school and beyond.

CHAPTER 3

METHODS

The importance of grade level reading cannot be underestimated in terms of student success in elementary and secondary school as well as in post-secondary endeavors. One of the greatest responsibilities a school has is to ensure all its students read on grade level. However the factors that influence reading achievement are diverse, and teachers offer the greatest direct impact through instruction. District and school administration must ensure that teachers can provide effective general and intervention small group reading instruction. The purpose of this action research study was to determine the impact of a professional development experience, designed on principles of efficacy and effectiveness, on teacher efficacy beliefs for literacy instruction and student reading achievement.

Many new teachers are not prepared to effectively teach all the components required for balanced literacy, and are also unprepared to plan and deliver student specific reading interventions (Birman et al., 2000; Neuman & Cunningham, 2009). The study assessed student growth in reading through guided reading level, as measured by Fountas and Pinnell Benchmark Assessment System, 2nd Ed. Further, the youngest struggling readers often lack a firm concept of word (COW); a feature which can be measured through the pointing and word identification tasks found in the PALs

assessment. Growth in these tasks for concept of word in emergent readers will be assessed as part of the study.

Teachers participating in the professional development were led by a contracted reading expert. The training method involved two full day trainings in which stages of reading development were explored and teaching methods for addressing the needs at each stage were discussed and then modeled briefly for the participants. The components of small group instruction covered in the training can be found in Table 6. During the second day of training the trainer modeled lessons with students from participating teachers' classrooms in order to provide a vicarious experience, for teachers in the areas of early emergent, late emergent, beginning and transitional. Finally at the end of the second day, teachers planned small group lessons using student data. The next four half day sessions consisted of teacher participants delivering intervention lessons in front of grade level peers and the instructor, which were followed by feedback and debriefing of technique, providing eventual mastery experiences, combined with verbal persuasion. While this was the first time teachers in the building have engaged in collegial feedback of instruction through professional development, staff members have participated in peer observations in the past and have been colleagues for over ten years in several cases, increasing the level of trust in each other. The study further assessed the impact of the training on teacher efficacy in literacy instruction.

Rationale for Choosing Action Research

An action research study is the most appropriate method for the problem of ensuring grade level reading at RCE for a variety of reasons. Action research is grounded in a pragmatic paradigm, with studies conducted in an authentic setting, with the goal of

solving actual problems of practice (Craig, 2009; Mertler, 2017) More specifically a participatory action research (PAR) study is most appropriate for the setting. As the assistant superintendent responsible for instruction, I was an observer of the training, but also played an integral part in the action research and improvement process. RCE and RCPS engage in a cyclical plan-do-study-act model of problem solving for school improvement, and have engaged in the process for improving grade level reading at the elementary school. After studying the results of the current interventions for improving reading outcomes, it became clear that our efforts with the use of LLI and other programs have been limited and another plan must be developed. This study is a part of this improvement effort and seeks to define effective professional development strategies for teachers, to provide the greatest impact on instruction in the classroom as well as teacher efficacy and ultimately student achievement.

An action research methodology lends itself to a mixed methods design, as is proposed for this study. Not only was quantitative data on reading achievement and teacher efficacy collected, but so was qualitative data through semi-structured interviews. Having multiple sources allowed for triangulation of the data, increasing the validity of the study and its results.

Further the study provided information about the impact of the professional development on the participants' perceptions and feelings about their own ability to impact students' reading abilities. These data will inform decision making about future professional development efforts unrelated to reading instruction. The study also provided information about improving student achievement in reading, which will allow the district to make more informed decisions about the most effective methods for teacher

training moving forward. With limited human and financial resources, it is critical that the district and school select effective solutions to problems as part of the plan, do, study, act improvement model. Action research with its focus on reflection and implementation of solutions to problems of practice was truly the best method for the study.

Context. RCE is a small elementary school located in a rural environment. Sixty percent of students qualify for free and reduced-price lunch and approximately 7% of students are considered English Language Learners (ELLs), and approximately 13% are identified as a student with a disability (SWD). Summative assessment data indicate that between 70 and 80% of students are successful on state defined reading measures annually.

The district has limited resources at its disposal to address problems specific to reading instruction. At the school and district level there is only two certified reading specialists, both of whom requested to leave the position and return to the regular classroom. As the district's instructional leader for the last several years, it is my responsibility to address improvement of instruction in all areas, but especially reading in Kindergarten through second grade. With limited personnel resources, it has been necessary to hire reading consultants to lead professional development, as well as provide observations and feedback to teaching staff, as reading specialists might do in larger districts. I have worked with the University of Virginia to identify and employ these consultants over the last five years, and have attended training as an involved observer. Because of my central office role, I do not participate in providing instruction to students, and therefore am not a full participant in the professional development.

As part of the cyclical improvement process, further needs in teacher training were identified related to small group differentiated reading instruction as a Tier II intervention. The school's leadership team, composed of teachers, a retired reading specialist, principal and assistant superintendent were integral in identification of the need and have included it in the district and school's improvement plan. After discussion with an external reading expert from University of Virginia (UVA) knowledgeable in the efforts made over time at the school, the decision was made to provide teachers with job-embedded training, which would model data use and reflective practice, combined with peer feedback (personal communication, S. Thacker-Gwaltney, May 9, 2016). The goal of this type of training is building teacher capacity to understand student weaknesses, develop plans and deliver appropriate instruction for struggling readers.

A secondary goal is to build teacher persistence in working with struggling readers, which is one characteristic of teachers with greater feelings of self-efficacy. Anecdotally teachers report not knowing how to help many of our struggling readers and express frustration that they are not reading on grade level and that "someone needs to help them." The discussion is not typically related to their being able to effect change in the students' reading abilities. For example when a student is identified as a student with a disability, the comment is often made "now they will get the help they need," when in reality they often do not receive anything different than they have been and may even receive fewer minutes of reading instruction when compared to their non-labeled peers; the class size may just be smaller. Another frequent response about struggling readers is "they need the reading center;" however an intervention and enrichment block is built into the school schedule for teachers to provide additional small group reading

instruction. This is another indicator of the teachers' low belief in their abilities to impact student reading growth. Teachers with greater feelings of self-efficacy are more likely to persist in working with struggling students and have also been shown to have students with greater reading achievement (Armor et al., 1976).

The context of the study was the school division in which I work, making this a good fit for an action research study. The last seven years of my work life have been dedicated to improving reading instruction at RCE, especially in K-2. The process has been grounded in plan-do-study-act, a school improvement model, which also has a basis in action research. As RCE and RCPS seek to improve grade level reading, data is constantly assessed and the school must ensure that Tier I and II instruction meets the needs of students, limiting the need for Tier III instruction. The selection of RCE as the study site necessarily informed the types of student data that were collected, as many reading assessments are already in place. Since the student groups used will be small, the amount of student data will also be small. The context is particularly meaningful as the results of this study will influence reading instruction RCE into the future. If the professional development model is successful in impacting teacher efficacy and student achievement, the district will pursue its transfer to other areas of instruction.

Role of the Researcher

As the assistant superintendent my role is a unique one that could potentially inhibit teachers' responses to surveys and interview questions, especially since I have been instrumental in changes to reading intervention over the last five years. However I have also attended every training for reading in the last ten years, which in some ways allowed me to be seen as more of an insider. I have established relationships with faculty

and staff that are very collegial in nature, and not based purely on my position in the organization. It is not unusual for me to attend trainings and provide follow up surveys on the results, as well as to have discussions about continuous improvement at the building and grade level, so acting as an active participant in the process was only natural. While I do not deliver reading instruction to students, I observed their instruction, along with the building principal and reading intervention teacher, under the guidance of the consultant so I am able to guide reflective conversations in the future for teachers.

Participants

Professional development was planned for small group differentiated reading instruction of readers in Grades K through 2. These students are typically classified as emergent, beginning or transitional readers, and their teachers will be targeted for selection. The recommended training group was ten to twelve participants and as such two teachers per grade level were invited to participate. The first request was for volunteers to participate and when second grade teachers did not self-identify, then the teachers with the most experience at that level were asked to join the initiative. It was critical for two teachers from a grade level to be involved so they can provide support to each other in planning and instruction, building capacity for targeted reading instruction in the future. The special education teacher and reading intervention teacher attended the sessions as they also work with struggling readers; the reading intervention teacher observed grade level teachers and provided feedback on instruction. Additionally the part-time Response to Intervention (RtI) coordinator attended; this individual was once the reading intervention teacher at RCE and continues to provide support to the current reading intervention teacher. While there are ten total participants in the training, the six

classroom teachers working with students in grades K-2 who will provide instruction to small student groups were given the TSELI and were interviewed to determine changes in their feelings of efficacy. Table 7 provides information about teacher participants. Students were selected based on their reading assessment data, in groups determined by the teachers. Human subject regulations were adhered to by both the researcher and the teachers.

Table 7

Teacher Participants

Participant Designation	Grade	Experience
Teacher A	Kindergarten	6; year 4 as Kindergarten
Teacher B	Kindergarten	4; all Kindergarten
Teacher C	1st	3; year 2 as a 1st grade teacher
Teacher D	1st	6; year 2 as a 1st grade teacher
Teacher E	2nd	16; year 8 as 2nd grade
Teacher F	2nd	16; year 7 as 2nd grade

Note. Experience in years.

Data Sources

The nature of this action research study made it ideal for a mixed methods approach. Student reading achievement data, teachers' perceptions of self-efficacy and the perceptions of the impact of the professional development experience were examined.

Data source one. Guided reading level, as measured by the Benchmark Assessment System 2nd Edition (BAS2) is collected in September and January. The BAS2 was developed by Fountas and Pinnell and is published by Heinemann. It is a

collection of carefully leveled texts which students read aloud to a teacher. The teacher completes a running record, marking errors by type and self-corrections; a fluency rate is established and students participate in a comprehension conversation with the teacher. Instructional levels are established through this process when a 95 to 97% accuracy rating is achieved with demonstrated comprehension.

Data source two. Students in Kindergarten participate in the Phonological Awareness Literacy Screening (PALs) Concept of Word (COW) assessment three times per year and are given COW tasks periodically by classroom teachers to determine the time when firm concept of word is established. The total score on the COW tasks of pointing and word identification will be used to measure transition from emergent reading to beginning reading for Kindergarten students, and those students in first grade who are still emergent readers. This critical measure signals the children's ability to participate in BAS2.

Data source three. Measuring changes to teacher self-efficacy in relation to literacy instruction is an important data element, which was accomplished using Teacher Sense of Efficacy for Literacy Instruction (TSELI), administered at the beginning and conclusion of the training. Tschannen-Moran and Johnson (2011) developed TSELI as part of a study to determine relationship between teacher feelings of efficacy toward literacy instruction and other factors such as years of experience, pre-service preparation for literacy teaching, and materials available. The 22-item scale was constructed with a basis in the "NCTE/IRA (1996) Standards for English Language Arts and the IRA (2004) Standards for Reading Professionals," and was assessed "for content validity" and has a

"Cronbach's alpha reliability of .96" (Tschannen-Moran & Johnson, 2011, p. 754-6). Sample items include:

1. To what extent can you use a variety of informal and formal reading assessment strategies?
2. To what extent can you model effective reading strategies?
3. To what extent can you use flexible grouping to meet individual student needs for reading instruction?

The complete version of TSELI is found in Appendix A.

Data source four. A semi-structured interview was conducted with teachers after the professional development was complete to gather more information about ways in which their self-efficacy beliefs were influenced and what aspects of the training were most influential in changing those beliefs. The interview questions can be found in Appendix B.

Data Collection

The nature of this action research study makes it ideal for a mixed methods approach. The student reading achievement data are systematically collected by teachers as part of their reading instruction, and as such are readily available. The data set related to teacher feelings of efficacy and the impact of the professional development experience came from several sources. Teachers completed the TSELI survey both before and after participating in the training and participated in a semi-structured interview after the entire professional development experience was complete. Table 8 provides a summary and rationale for the data to be collected.

Table 8

Data Elements and Their Collection

Data Element	Collection	Rationale
Concept of word measure-pointing and word identification	Concept of Word summed score on PALs assessments in October and late January to K students; periodically by teachers	Indicates whether or not students have a firm concept of word
Guided reading levels	Administered by teachers using full BAS2 in early September, early February, and late May to 1st and 2nd graders; assessed informally monthly through running records as part of small group instruction	Provides instructional reading level and shows changes in reading achievement
Teacher efficacy ratings, through TSELI	Collected at beginning and end of training from teachers K-2	Show any changes in teacher self-efficacy
Teacher reported impacts of training on self-efficacy	Semi-structured interviews conducted after the training with teachers K-2	Further describe any potential changes in self-efficacy and what aspects of the training were most impactful in the change

Data Analysis

The data gathered in this study is both quantitative, with measures of student reading achievement and Likert-type responses to a teacher questionnaire, and qualitative, with observations of teachers and students participating in reading training and instruction and teacher interviews. As a mixed-method study, the data were analyzed both deductively and inductively (Mertler, 2017).

Action research question one. To what degree do teacher planned and delivered small group reading interventions impact reading outcomes of Tier I and Tier II students, as measured by benchmark assessments?

RCE measures student reading achievement in several ways. As part of Virginia's Early Intervention Reading Initiative (EIRI), the Phonological Awareness Literacy Screening (PALs) is administered to K-2 students in fall, mid-year and spring, and to targeted students in the fall of third grade. To obtain a more precise instructional guided reading level, teachers administer the Fountas and Pinnell Benchmark Assessment System, 2nd edition, in the fall, mid-year and spring to students in grades 1 through 4, and complete running records for students monthly to assess their progress through the guided reading levels. Kindergarten students do not participate in Fountas and Pinnell until they have firm concept of word established, as measured by PALs summative concept of word. Data on guiding reading level and concept of word attainment was easily collected and provided information about changes in student reading achievement. Student reading achievement data was evaluated using a dependent samples t-test, changes to mean scores and overall differences in scores (Mertler, 2017). Significance of the t-statistic was determined by comparing it to the two-tailed critical value, along with the p-value, as calculated by the Excel data analysis pack on pre and post data.

Action research question two. To what degree are teachers' feelings of efficacy influenced by participation in professional development designed based on research-based principles of effectiveness?

Changes to individual teacher's feelings of self-efficacy were measured through analysis of data collected on the TSELI, both before and after the training. Changes to

individual items were assessed for each teacher; a dependent samples t-test assessed any statistical significance in the results. Data were also aggregated for each item and examined through descriptive statistics to determine the mean and any change to items over time. Significance of the t-statistic was determined by comparing it to the two-tailed critical value, along with the p-value, as calculated by the Excel data analysis pack on pre and post data.

Further information on teacher feelings about the process and efficacy was collected through a semi-structured interview process. Teachers were interviewed individually with questions tied to elements of efficacy at the conclusion of the professional development. Sample interview questions are found in Appendix B. Qualitative data gathered through interviews were evaluated through an inductive process to identify themes. The four-step process Mertler (2017) outlines was followed once data has been gathered and transcribed: develop a coding scheme; describe categories; look for conflicting evidence; interpret the data. Table 9 provides a summary of data analysis conducted on the collected data.

Table 9

Data Analysis Summary

Evaluation Question	Data Sources	Data Analysis
Question 1	BAS2; COW Summed score for pointing and word identification	Dependent samples t-test; Descriptive statistics: mean
Question 2	TSELI	Dependent samples t-test; descriptive statistics: mean
	Teacher Interview	Mertler's 4 step inductive process

Timeline

Table 10 provides a detailed timeline of the proposed study.

Table 10

Study Timeline

Date(s)	Activity
Late September, Early October	Students have initial GR levels established and participate in COW pointing assessment
October 27	Initial professional development training; teachers take TSELI
November 10	Day 2, with modeled lessons
November 30, December 14, January 6, January 20	Teachers instruct small group and are observed by peer partner and reading intervention teacher; teachers provide each other feedback on what worked and did not work
Last week in January	Teachers take TSELI again; participate in interviews
End of January, Beginning of February	Students have GR levels established and participate in COW pointing assessment
Mid-late February	Data analysis and write up

Limitations

A significant limitation to the study is the role of the researcher as assistant superintendent. While many teachers are comfortable in their interactions with me, the fact remains that I am in a position of power, which could have impacted responses. Teachers may not have felt comfortable in an interview setting sharing the honest opinions about a program which they know I was integral in planning. All teachers were

assured that their responses were confidential and not associated with an identifier, and that the information provided will not be used in any way to evaluate them as personnel. The sample sizes are also necessarily small; the percentage of students identified as Tier I or Tier II readers are not large and with only two teachers per grade level, there was not be a large amount of student data to assess. Finally the choice of participating teachers is also a limitation; every teacher participant is viewed as a strong literacy instructor, so it is possible that student achievement may be impacted by that fact alone.

Ethical Considerations

The research study adhered to the Program Evaluation Standards developed by the Joint Committee on Standards for Educational Evaluation to include the areas of utility and propriety (Yarbrough, Shulha, Hopson, & Caruthers, 2011). As the nature of this evaluation was to provide district and school decision makers with information about the impact of professional development on reading outcomes and teacher efficacy, for future decisions on professional development, therefore it was necessarily focused on utility. Involving teachers, a key stakeholder group, in determining the effectiveness of professional development in the implementation of the program allowed them to become more involved assessing and then developing the types of activities that best affect change in the classroom. The student data collected and analyzed is currently used to make instructional decisions at the student and classroom level; using this same data to make programmatic, school level decisions improves the relevance of the evaluation.

It is critical for the study to adhere to the "ethical, legal and professional considerations" outlined in the propriety standards (Yarbrough et al., 2011, p. 109). As one of the decision makers in the district for several years, there are many relationships

that have been established prior to this evaluation. While this assists in understanding the context of the program, it also adds a level of complexity that must be considered in addressing propriety. Teacher participation in the survey and interview process was completely voluntary. The collection of student level data did not involve any interactions with students that do not already regularly occur and are reported only in aggregate; therefore students were not directly affected in any way. It was also critical to maintain responsiveness to stakeholders when "contradictory views…and beliefs regarding data" are expressed by teachers as part of the process (Yarbrough et al., 2011, p. 115). Attending to this assisted in reducing the perception of bias to stakeholders. Finally it is critical to share findings with all stakeholders in an appropriate manner, maintaining the anonymity of the individuals providing information or other data. Teachers are only referred to by letter, and there is not any identifiable student information included. This also assists in providing transparency moving forward with any recommendations developed from the evaluation.

The program evaluation plan was approved by the College of William and Mary's Institutional Review Board (IRB) and the district superintendent. IRB approval was sought after the proposal was approved and on the advisement of the dissertation advisor and then was be submitted to the district superintendent for approval. Once both groups approved the plan, the study moved forward.

CHAPTER 4

FINDINGS

The study assesses the impact of a professional development designed around the domains of efficacy: verbal persuasion, vicarious experience, mastery experience and physiological and emotional states. Teachers' feelings of self-efficacy were measured by the TSELI instrument, as well as a semi-structured interview, which was held after the professional development sessions. Impact of the training on student achievement was also measured through performance on reading outcomes measures before and after teacher training.

Action Research Question One

To what degree do teacher planned and delivered small group reading interventions impact reading outcomes of Tier I and Tier II students, as measured by benchmark assessments?

Kindergarten. In Kindergarten, a key indicator of transitioning between being an emergent and beginning reader is attainment of concept of word (COW), which is measured by the PALs assessment with three subtests, whose measures are combined into a single summative COW score, ranging between zero and 22 (Bear et al., 2008; Invernizzi, Juel, Swank, Meier, 2015; Tyner, 2007;). The summative COW score was assessed for Kindergartners in October and again in late January with PALs, and the results recorded in the PALs database. A dependent samples t-test was conducted on the student data from the fall and the mid-year COW assessments to obtain the t-statistic and

a p-value, using the Excel data analysis tool pack. The mean change in student score was also calculated using Excel. Table 11 shows the results of this test for the group of students whose teachers participated in the professional development.

Table 11

Analysis of COW[a] Results for Kindergarten Students

Statistical Element	Value
Fall Mean	2.05
Mid-Year Mean	9.03
Dependent samples t-test	$t(37) = 10.43$, $p < .001$

Note. n = 38. [a] COW = Concept of Word

The students of teachers who participated in professional development had a statistically significant increase in their summative COW score, $t(37) = 10.43$, $p < .001$. However, for Kindergarten students of teachers who participated in professional development the mean increase for the summative COW was 6.9, while for other students the mean increase was 5.4. Further examination of the data by student Tier showed that both groups of students improved COW achievement, but Tier II grew at a slower rate than students in Tier I, see Table 12. The exception is for teacher B's Tier II students, however there are only three students in this group, so caution should be taken in any interpretation of those results.

Table 12

Change in COW[a] Results for Kindergarten Students by Tier, by Teacher

Teacher	Tier I	Tier II
Teacher A	11.4	7.2
Teacher B	8.5	10.0
Total Kindergarten Increase	9.4	8.25

Note. [a] COW = Concept of Word.

First grade. Students in first grade participate in periodic assessments of their reading progress, most notably the BAS2, which measures students' guided reading

levels, which is indicated as a letter, AA through Z. In order to interpret the results of changes in guided reading level, the letters were assigned a numerical value, AA=0, A=1, and so on. Teachers use the BAS2 in fall, mid-year and spring, and student guided reading level is reported in the school's database. Student guided reading level for fall and mid-year were collected, assigned a numerical value and the paired t-test was conducted using the Excel data analysis tool pack, as was the mean change, by teacher. Table 13 provides a summary of changes in student guided reading levels between September and mid-February.

Table 13

Analysis of Guided Reading Level Results for First Grade Students

Statistical Element	Value
Fall Mean	4
Mid-Year Mean	8
Dependent samples t-test	$t(30)=13.99$, $p < .001$

Note. n = 31

The students of teachers who participated in professional development had a statistically significant increase in guided reading levels, $t(30) = 13.99$, $p < .001$. It is important to note that students in the classes whose teachers had professional development increased an average of 4 guided reading levels, while those in the other classrooms increased an average of 3 levels. Table 14 provides reading level improvements by teacher and by student tier. Note that Teacher C did not have any Tier II students in her class; her lower reading students are all Tier III students, whose reading levels increased by an average of 2.

Table 14

Change in Guided Reading Level by Tier, by Teacher

Teacher	Tier I	Tier II
Teacher C	4.5	2.5
Teacher D	3.4	No students
Total 1st Increase	4.1	2.5

Second grade. Students in second grade also participate in the BAS2 reading assessment to determine their guided reading levels. Teachers use the assessment in fall, mid-year and spring, and student guided reading level is reported in the school's database. Student guided reading level for fall and mid-year were collected, assigned a numerical value, 0 through 26, and the paired t-test was conducted using the Excel data analysis tool pack, as was the mean change, by teacher. Table 15 presents a summary of changes to these students' reading levels.

Table 15

Analysis of Guided Reading Level Results for Second Grade Students

Statistical Element	Value
Sept Mean	10
Feb Mean	12
Dependent samples t-test	$t(33) = 10.80$, $p < .001$

Note. n = 34

Second grade students also showed statistically significant increases in their students' reading achievement, as measured by guided reading level. Students of teachers who had professional development had a mean increase of 2, with $t(33) = 10.80$, $p < .001$ and those of teachers not participating in professional development having a mean increase of 3. Table 16 provides changes to guided reading level by Tier, by teacher.

Table 16

Change in Guided Reading Level by Tier, by Teacher

Teacher	Tier I	Tier II	Tier III
Teacher E	1.8	No Students	2.7
Teacher F	2.3	No Students	3
Total 2nd Increase	1.9	No Students	2.5

Teacher E and F have no Tier II students; their lower readers are all labeled as Tier III. While not the targeted group, these students did show growth at a greater rate than Tier I students in their classrooms.

Summary. The changes in all students' reading achievement, regardless of measure, were found to be statistically significant through the dependent samples t-test. However, for students of teachers participating in professional development in both Kindergarten and first grade, the mean increase in achievement scores was greater than that of those in the other classes. In second grade, the mean increase was greater in the classes of teachers who did not participate in professional development, although only by one level.

Action Research Question Two

To what degree are teachers' feelings of efficacy influenced by participation in professional development designed based on research-based principles of effectiveness?

Changes to feelings of efficacy measured by TSELI. The survey instrument Teacher Sense of Efficacy for Literacy Instruction (TSELI) was used as a pre and post measure of the six teachers' feelings of efficacy. The survey was administered at the start of the first professional development session and at the conclusion of the last professional

development session. Table 17 provides the mean response for each of the 21 survey items, before and after the training, as well as the change in the mean over time.

Table 17

Pre and Post Mean Response Values to TSELI

Item	Pre-Training	Post-Training	Difference
Use a student's oral reading mistakes as an opportunity to teach effective reading strategies?	7.17	7.67	0.50
Use a variety of informal and formal reading assessment strategies?	7.33	8.00	0.67
Adjust reading strategies based on ongoing informal assessments of your students?	7.00	8.00	1.00
Provide specific, targeted feedback to students' during oral reading?	7.17	8.00	0.83
Meet the needs of struggling readers?	7.67	8.33	0.67
Adjust writing strategies based on ongoing informal assessments of your students?	6.00	5.83	(0.17)
Provide your students with opportunities to apply their prior knowledge to reading tasks?	6.83	7.33	0.50
Help your students monitor their own use of reading strategies?	6.67	7.33	0.67
Get students to read fluently during oral reading?	5.67	7.50	1.83
Model effective reading strategies?	6.83	8.33	1.50
Can you implement effective reading strategies in your classroom?	6.83	8.33	1.50
Help your students figure out unknown words when they are reading?	6.67	7.50	0.83
Get children to talk with each other in class about books they are reading?	5.00	6.50	1.50
Recommend a variety of quality children's literacy to your students?	5.50	6.83	1.33
Model effective writing strategies?	5.50	6.67	1.17
Integrate the components of language arts?	6.33	7.50	1.17
Use flexible grouping to meet individual student needs for reading instruction?	7.33	8.50	1.17
Implement word study strategies to teach spelling?	6.33	8.17	1.83
Provide children with writing opportunities in response to reading?	5.83	7.00	1.17
Use students' writing to teach grammar and spelling strategies?	5.50	6.17	0.67
Motivate students who show low interest in reading?	5.83	6.50	0.67
Adjust your reading materials to the proper level for individual students?	6.50	8.33	1.83

Note. Teachers were asked “To what extent can you….”

The items with the greatest increases were “to what extent can you get children to read fluently,” “to what extent can you adjust your reading materials to the proper level for individual students” and “to what extent can you implement word study strategies.” One item had a negative growth rate: “to what extent can you adjust writing strategies based on on-going informal assessments.” The areas with the greatest increases were a relative focus of the professional development training, while the area with negative growth was not addressed at all.

Each of the six teachers showed an increase in their feelings of efficacy, when the mean for all items was calculated, although the degree of the changes were variable. Table 18 provides a summary of the changes for each teacher.

Table 18

Changes to Teacher Total Mean on TSELI

Teacher	Grade	Pre-Average	Post-Average	Difference
Teacher A	K	6.50	7.14	0.64
Teacher B	K	7.50	8.36	0.86
Teacher C	1	5.05	6.09	1.05
Teacher D	1	6.68	7.91	1.23
Teacher E	2	6.14	7.86	1.73
Teacher F	2	6.73	7.45	0.73

The data provided by the pre and post administration of the TSELI were further analyzed to determine what, if any, statistical significance was present. Table 19 provides the results of the paired samples t-test, conducted with the Excel data analysis tool pack, which indicate that there was a statistically significant change in efficacy beliefs.

Table 19

Analysis of Teacher Responses to TSELI Pre and Post Training

Statistical Element	Value
Pre-training Mean	6.53
Post-training Mean	7.36
Dependent samples t-test	$t(5) = 8.26, p < .001$

Note. n = 6

Impact of training components on efficacy. A semi-structured interview was conducted with each of the participants at the conclusion of the professional development. Each of the questions asked was aligned with one of the factors identified to the impacting factors on self-efficacy: verbal persuasion, vicarious experiences, mastery experience and physiological arousal. Several themes were identified in the resulting responses: experiences helpful to teachers in implementing new strategies; experiences causing negative feelings about teaching ability; consultant knowledge and materials; and reflection on current classroom practice.

Experiences helpful in implementation. Teachers engaged in a vicarious experience by watching the consultant model three small group lessons, and through follow-up conversation about experiences with individual students. It was these vicarious experiences most frequently mentioned as impacting their feelings of self-efficacy, brought up in every interview, over 30 times. The teachers each indicated that seeing the consultant model the instruction was helpful in "showing…what else I could do." Each teacher also indicated that it was better to watch the consultant than to simply see the information written down on paper, with teacher D stating "this is what she means," and B said "it reassured me that I was doing what I was supposed to be." Teacher D stated

that she would like to have "seen more of that. Because she was so very effective." The verbal discussion of vicarious experiences was also was also important, especially related to strategies to use with the struggling readers. Each teacher mentioned that talking about other teachers' students and developing a plan of action for those students was helpful for their work with other, similar students. Teacher C stated "it gave me ideas of how to work with these kids."

The verbal persuasion experienced by teachers throughout the professional development consisted of feedback provided after each of three lessons taught in front of the consultant and peers. The feedback was given by both peers and the consultant and was related not only to the instruction of the lesson, but also about an identified focus student. Overall the teachers indicated that the verbal feedback was helpful to them, mentioning this 12 times. Every response referred to the feedback as "helpful," "reassuring," "positive," and "reinforcing". When the consultant modeled a lesson, she also modeled verbal feedback for herself, saying "Next time I would do that differently. It didn't seem like they got it," referring to the way in which she taught the students a poem. Teacher D stated that it was very "helpful hearing what she would do differently next time."

The professional development provided three opportunities for mastery experiences in front of peers and the consultant. At the end of the third taught lesson, all teachers indicated that they felt "confident," "I knew what I was doing," "capable," "able to teach each problem area" and "I feel like I know what I am supposed to do now." Teachers also indicated that they had mastery experiences in the classroom between training sessions. Teacher D stated "we had been practicing and had more time to

experience it in the classroom." Teacher C said it "helped to do it over and over." These positive mastery experiences were indicated seven times throughout each interview.

Experiences causing negative impacts to self-efficacy. There were statements that the verbal feedback did negatively impact teachers' beliefs, however they were all related to the feedback received after their first lesson taught in front of the group. Teacher C stated "at first it makes you feel like you are doing everything wrong," and teacher D said "[the consultant] was pretty critical and I lost my confidence. It was a little bit of a bruise." However both teachers stated that after the second and third lessons, teacher C stated "things were becoming more positive and…it's actually helping." It was as if the first lesson taught in front of peers and the consultant was the opposite of a mastery experience, in that "it didn't go well," and teacher D said "the first time was so bad." She further stated that she was not entirely sure that she knew what the consultant wanted. Other negative comments included "it was intimidating. [The consultant] may be thinking 'this is not a good teacher,'" from teacher C, and "I did not feel confident," from teacher A. Teacher D said she "lost… confidence" after the first lesson but the more time she had to practice the better she felt.

Consultant knowledge and materials. Each teacher also indicated that the new lesson plan frameworks along with the prepared materials, given to them by the consultant were very helpful. The lesson plan for small group reading instruction was mentioned as being helpful by each teacher interviewed a total of 9 times. Three teachers also indicated that the consultant's assistance in interpreting their data to form or re-form instructional groups was a significant benefit to their instruction. The ready-made materials were distributed throughout the training and the teachers either engaged in the

activity themselves, or watched a student use the materials before they used them in their classroom. Each teacher also indicated that they used all the materials provided; they only negative comments, three, were related to the volume of materials presented. While learning to use the materials was a vicarious experience initially and later experienced through mastery, they also represent the importance of content and pedagogy to the teachers' feeling of confidence in their abilities after the training.

Reflection on classroom practice. Each teacher interviewed made statements related to reflection on instructional practices in their classroom. These statements indicated an affirmation of current practice or a challenge to their current practice. Table 20 provides a summary of the number of challenging and affirming statement provided by each teacher.

Table 20

Analysis of Teacher Responses Related to Reflection on Classroom Practice

Teacher	Affirmation of Current Practice	Challenge to Current Practice
A	0	4
B	2	9
C	0	7
D	1	6
E	2	0
F	2	2

Generally the statements that centered around reflections challenging to current practice were "I need to tweak some things" and "I wasn't doing that before but I am now" and "How can I be most effective." Most statements related to affirmation of current practice were similar to "it reinforced what I already do" and "it was an affirmation" of what was going on in the classroom.

Summary. The teachers who participated in the professional development exhibited increased feelings of self-efficacy, as measured by TSELI and through a semi-structured interview. The changes to their feelings of efficacy were statistically significant, as shown by the dependent sample t-test results, and the areas with the greatest increases were also areas of relative focus in the training. The interviews indicated that teachers found the consultant's modeling helpful in implementing small group differentiated reading instruction, as they were better able to understand what she wanted them to do. However, there was an indication from half of the teachers interviewed that their experience during the first observed lesson was a negative impact on their beliefs about their abilities, either through the verbal feedback they received, or through the comparison of their teaching with the consultant. Although not directly tied to self-efficacy, there was also a theme of reflection on current practice running throughout the interviews, with four teachers making numerous statements related to changing their current practice, and two teachers seeing the training as confirming their current practices. Ultimately, though, each teacher indicated that at the end of the professional development they felt confident, capable and able to help their all their students improve as readers.

Summary of Findings

Students whose teachers participated in the professional development training exhibited increases in reading achievement, as shown by the Concept of Word summed score from the PALs assessment, and by increases in guided reading level, as measured by the BAS2. For students in Kindergarten and first grade, the gains of those students whose teachers participated in the professional development were greater than those

whose teachers did not. However, students in second grade showed less growth than those whose teachers did not participate.

Teachers participating in the professional development indicated greater feelings of efficacy on TSELI, which was administered both before and after the training. The semi-structured interviews conducted with the teachers also revealed greater feelings of efficacy, although two teachers indicated a decrease in their efficacy during the middle of the training. This dip was resolved by the end of the training, however, with both stating they felt confident in their abilities to provide effective reading instruction.

CHAPTER 5

RECOMMENDATIONS

Literacy is more than an educational issue, it is a complex equity issue, with far reaching implications, especially for those students who do not read on grade level by the end of third grade (Lesnick et al., 2010). Teachers and administrators at RCE work hard to ensure that all students are successful on state summative assessments beginning in third grade, indicating an ability to read on grade level. However, these efforts have not been effective for all students, with an average of 69% of third graders passing the Virginia Reading SOL in the last four years (VDOE, 2016b). This problem is not solely the burden of third grade teachers, but also a result of literacy instruction in Kindergarten through second grades. In fact, Juel (1988) found that students who were poor readers in first grade, remained poor readers through third grade. Intervention for students not meeting grade level expectations is critical to close the gap (Torgesen, 2004).

Classroom teachers at RCE have been providing Tier II interventions to students in reading using LLI; however the program has not provided the hoped-for results and teachers indicated dissatisfaction with it. To address this issue the school leadership team decided to implement reading intervention for Tier II students in the classroom through differentiated small group instruction. To improve reading outcomes, training for targeted teachers in Kindergarten through Grade 2 was provided during the fall and winter of the 2016-2017 school year. This training was designed on principles of effective professional

development and factors that influence self-efficacy: coherence; job-embeddedness; includes content and pedagogical knowledge; vicarious experience; mastery experience; and verbal persuasion.

The purpose of this action research study has been to measure the impact of the program on reading achievement and teacher feelings of efficacy. Student reading achievement data was examined for Tier I and II students whose teachers participated in professional development to determine if there was a statistically significant increase. Teachers' self-efficacy was assessed before and after training using a nine-point Likert scale survey instrument, Teacher Sense of Efficacy for Literacy Instruction, and a semi-structured interview. These results have been used to inform not only the expansion of the professional development to all reading teachers in K-3, but also the use of small group differentiated reading instruction as the Tier II intervention for struggling readers at RCE.

Summary Findings

Action research question one. To what degree do teacher planned and delivered small group reading interventions impact reading outcomes of Tier I and Tier II students, as measured by benchmark assessments?

Students of teachers who participated in the training demonstrated improved reading achievement, as measured by COW in Kindergarten and guided reading level in first and second grades. All students showed improvements in their reading abilities, based on these measures. However, when compared to students whose teachers did not receive professional development, the Kindergarten students had greater gains, with an average increase of 6.97, while the other group's average increase was 5.4. While the

mid-year average for professional development (PD) students was lower (9.03) than non-PD students (9.95), the overall growth of the PD students was greater, a necessity if the Tier II students are going to close the gap with their grade level peers. When the students are further divided into instructional tiers, the Tier II PD students achieved mean growth of 8.25 and Tier II non-PD students grew an average of 5.9 on the COW measure.

Students in first grade showed similar, greater gains in teachers' classes who had received the professional development. The mean increase in guided reading level was four, while for students in non-PD classes, the gain was 3 levels. However Tier II PD students gained 2.5 levels and Tier II non-PD students gained an average of 1.75 levels. While the group size is small, and guided reading level is only an indicator of grade level reading ability, these findings are promising as RCE looks forward.

Student outcomes in second grade were different than those in Kindergarten and First grade. PD students' gains were not as great as those of non-PD students, improving by 2 reading levels, compared to 3. Interestingly, the two teachers participating in professional development did not have any identified Tier II students, only students in Tier I and III. Tier I PD students grew an average of 2 reading levels, while non-PD Tier I students grew an average 3. Tier III students gained an average of 2.5 levels in both groups. Moving forward it will be important to examine what is happening in second grade more closely. These results could be an anomaly, or are they may be a result of classes that have a greater concentration of weaker students.

Outside the scope of this study, observations of literacy instruction have shown an increase in the numbers of instructional activities found on the district's small group reading instruction observation tool, which is found in Appendix C. These observation

forms are aligned with the training provided to the teachers, and are aligned to the instructional requirements indicated at each stage of reading development. For example, all Tier II and III students in Kindergarten are emergent readers. The small group instruction for these students should have three main components: alphabet knowledge, phonological awareness and concept of word, with the lesson focused mainly on alphabet knowledge and concept of word activities. Before training occurred, these three components were not present daily in all small group lessons; however observations have shown that they are now present daily, and teachers are using a variety of activities to address each area.

Action research question two. To what degree are teachers' feelings of efficacy influenced by participation in professional development designed based on research-based principles of effectiveness?

The teachers participating in professional development all showed increases in their feelings of efficacy overall, and on all but one indicator on the TSELI. The areas with the greatest increases were also areas of focus throughout the professional development, and those with the lowest averages were not of significant focus. For example, there was a negative change in overall feelings about ability to adjust writing instruction based on ongoing informal assessments of students. A possible reason for this could be a greater awareness of the teachers about their instructional abilities after the training. Perhaps they realized they were not using informal writing assessment data in the same ways they had been taught to use informal reading assessment data to adjust instruction.

The interviews conducted with the teachers also indicated that some of the teachers likely experienced fluctuations in their feelings of efficacy during the training. Tschannen-Moran and McMaster (2009) found that teachers who have a new literacy strategy modeled for them may experience a decrease in efficacy which can be increased with follow-up coaching. The two first grade teachers, who also have the least experience at their current grade level, both indicated the first observed lesson they taught was very stressful, saying "it was just so bad," and expressing concern that the consultant may be thinking "this is not a good teacher." Observing their reactions and interactions during that training also indicated they felt unsuccessful. However, after the second and third observed lessons, their instruction was improved, with more appropriate instructional materials and exhibiting more indicators on the small group observation form. All six teachers said during the interview process they felt confident in their ability to implement the small group instruction with fidelity to the model provided in the professional development.

There is also an interesting relationship between the post-training efficacy average and the changes in student achievement of Tier I and II students. The three teachers with the highest efficacy averages also had the three smaller increases in student achievement. Conversely the teachers with the lowest overall post-training efficacy had the greatest changes in student reading achievement. In such a limited study with small numbers, this finding will not impact the educational world; however it might be a reflection of K.F. Wheatley's idea that teachers may benefit from lower efficacy, as they will work to seek out new ways to provide instruction. Table 21 shows teachers' post-training efficacy

average and the changes their Tier I and II demonstrated on the designated reading achievement measure.

Table 21

Post-training Teacher Efficacy and Student Reading Achievement Change

Teacher	TSELI Average	Change in Reading Achievement
A	7.14	9.3
B	8.36	8.8
C	6.09	4.0
D	7.91	3.6
E	7.86	1.8
F	7.45	2.3

Note. Teachers A and B teach Kindergarten; K reading achievement is based on COW and not guided reading level.

Implications for Policy and Practice

This study has generated several notable implications for policy and practice at both RCPS and RCE. Table 22 lists the general findings and five related recommendations.

Table 22

Study Findings and the Related Policy and Practice Recommendations

Findings	Related Recommendations
Student reading achievement improved with teacher training; there were greater gains in K and 1 for PD students	Provide all reading teachers with the same training, K-3 Ensure fidelity of small group implementation, to include increasing building principals' capacity to provide supervision and feedback
Teacher efficacy increased in almost all areas, but most where the training focused	Provide other types of professional development designed on the same principles of effectiveness and efficacy Establish a procedure for peer observation and debriefing Explore how to help teachers balance confidence and competence

Recommendation one. With the noted increases in student reading achievement, all teachers of reading will participate in the same reading training with the consultant in Kindergarten through Grade 3. The small group intervention instruction is designed for Tier II students, those who are having reading difficulties, but not the greatest difficulties. The training is designed around knowing the stage of reading development the students are in, and then using a lesson plan structure to address the needs of a student at that reading level. Typical Tier II students in Kindergarten or first grade would be emergent or beginning readers, but Tier II students in second grade at RCE are typically in the beginning or transitional stage. With this information in mind, the second round of training will not consist of teachers K-2, but rather the remaining untrained teachers in Kindergarten and first grade. This will allow for the consultant to focus on the emergent and beginning lesson plans, without the need to address the transitional reader. A third training session will be held for teachers in second and third grades. Teacher F, a second grade teacher, indicated in her interview that while the emergent instructional resources were interesting, they were not impactful for her teaching. Separating the training will allow these teachers to focus on beginning and transitional reader instruction.

A necessary contextual consideration is the nature of the teachers in second grade who have not yet participated in the training. This group of three teachers are generally reluctant to change their instructional practices and will likely benefit from training that entirely focuses on the reading needs second grade students have. The three third grade teachers who will join the training are generally flexible and willing to try new teaching strategies, so should balance this more entrenched group. The smaller group size of six

teachers will also allow for the consultant to provide greater focus on this group of instructors.

An additional benefit to providing all reading teachers in K through 3 with the same small group training is building coherence and collective participation (Birman et al., 2000). RCE has a goal of increasing third grade reading scores, not only because of state and federal guidelines, but also as part of its commitment to equitable education for all students. With all teachers trained in the provision of differentiated small group reading instruction for interventions, coherence will be improved across the grades. An additional benefit is the discussions that can occur during data meetings and problem solving, as every teacher will be able to apply the principles of the training for all students. As the interviewed teachers indicated repeatedly, they found a significant benefit to talking with their peers about strategies to implement with students in their classes. It will be important to continue these conversations in grade level meetings moving forward.

Recommendation two. Ensure that differentiated small group instruction is implemented with fidelity across the school as all teachers complete the training. Ensuring fidelity is a necessary part to provide follow-up for the training (Bevins et al., 2011; Guskey, 2009). There are several ways to ensure that the small group instruction continues to be delivered with fidelity. One strategy is to have teachers turn in their weekly lesson plans for their small group lessons. Teachers already turn in lesson plans, but the building administration should require the completion of the lesson plan templates provided by the consultant on a weekly basis, and ensure their alignment with the

components of small group differentiated reading instruction, as outlined for emergent, beginning and transitional readers, see Table 6.

The reading consultant also provided school administration with small group reading observation checklists. A critical step in moving forward will be to provide administrators with training in using these checklists to assess small group reading instruction and provide feedback to grade level teachers. Taking this necessary step to increase the building administrators' capacity to provide specific feedback to teachers about small group reading instruction will help ensure the type of instruction required for struggling readers will exist consistently across classrooms, and will become part of the culture of RCE. Teachers should also be given these check lists; then building and district administrators should use them as they observe small group reading instruction and share the results with teachers after observations. This observation data should be aggregated to identify any potential areas of strength or weakness across small group instruction in the building.

A final strategy will be to employ a part-time literacy supervisor. The size of the district and its limited budget make it difficult to employ a large central office staff. In fact there are no specialized instructional positions at the central office other than the Director of Special Education. Employing a part-time supervisor to observe, coach and provide feedback to teachers on their small group literacy instruction, as well as assist with data analysis and planning for student interventions, will be critical for obtaining and sustaining the gains necessary for student grade level reading. It will be important to hire an individual with the following characteristics for this new position: strong knowledge of balanced literacy instruction and its components; small group differentiated

reading instruction; and the ability to provide specific feedback to teachers about their instruction in a direct but positive manner.

Another critical responsibility for this individual will be to provide building administrators with the training necessary to provide effective feedback to teachers about small group differentiated reading instruction. The funding currently available for the position may not always be there, so it is critical to work on changing building culture to one where student need is met through small group differentiated instruction. This cannot occur effectively unless building leadership is able to engage with teaching staff to assist in the provision of this type of instruction. Without this integral component, teachers may drift back to their old instructional strategies and children will cease to make appropriate gains.

Recommendation three. Design training for teachers across disciplines based on the principles of effective professional development and aligned with the principles for impacting self-efficacy. Each teacher who participated in the training indicated they felt confident in their abilities to deliver the research-based instruction, and that their students had shown growth as a result of that instruction. Observations of their teaching also showed an increase in the number of instructional tasks found on the small group reading instruction observation form, and student achievement increased at a greater rate in Kindergarten and first grade. The teachers have changed their instructional practices as a result of this training, based on self-report and administrator observation.

The interviews conducted with the teachers indicated they found a significant value in teaching lessons in front of their peers, both in seeing what others do with students, and for the verbal discussion after the lesson. These eventual mastery

experiences and verbal persuasion experiences were impactful in the teacher's improved feelings of efficacy. Not only does this type of learning fulfill the "active learning" (Birman et al., 2000, p. 31) and job-embeddedness that research supports as good professional development, but it also crosses the boundary into impacting efficacy (Bandura, 1997; Bevins et al., 2011; Guskey, 2009).

Another consideration in planning training moving forward is content focus, as teacher knowledge and skill are increased when professional development is related to a single content area, enhancing subject-specific knowledge and pedagogy (Birman et al., 2000; Guskey, 2003). Teacher interviews also support this finding in the context; although the focus of the training was small group differentiated reading instruction, the pedagogical requirements were different across the three reading stages addressed, and teachers stated that while the other information was useful, it was not impactful in their teaching, since they did not encounter the need for it. Typically RCPS provides general professional development, especially to secondary teachers, in areas like formative assessment or cooperative learning. This is an area which the district will need to change moving forward.

Recommendation four. Establish a procedure for peer observation and debriefing throughout the division, but beginning in Kindergarten through third grades. Each teacher indicated the importance of watching their peers, focusing on one student's behavior and then brainstorming the next instructional steps for that student. This is a vicarious experience for one teacher and a verbal persuasion experience for the other, and it also works towards building collegiality, an important piece of effective professional development (Bandura, 1997; Carlisle et al., 2011; Vanderburg & Stephens, 2010). While

the district is unable to afford a full-time literacy coach, establishing routines and procedures where peers work together to provide feedback to each other contributes to procedurally embedding the professional development and fostering a collaborative community that tackles implementation challenges together (Birman et al., 2000; Guskey, 1997).

Recommendation five. Explore how to help teachers balance confidence and competence. Teachers with a greater sense of self-efficacy have been shown to impact student achievement in reading, and are more likely to persist in working with struggling students (Armor et al., 1976; Gibson & Dembo, 1984). However, K.F.Wheatley (2005) points out that some teachers may have "naïve optimism" about a teaching strategy or that they may be pretending "to feel more confident than they truly are" (p.751). It is this idea which may also be impacting the second-grade teachers; they seemed to find the training the least helpful and provided the least specific feedback during the interviews. In feeling the instruction provided is already reaching their struggling readers, they also had the least motivation to work on changing their small group differentiated reading instruction, with the fewest responses indicating a need to change current instruction. When relating the data from the post-administration of the TSELI to average student growth, the three teachers with the highest efficacy ratings had students with lower achievement gains than those with lower efficacy scores. This relationship is also seen between the teachers who indicated the training affirmed what was happening in their classrooms, and did not challenge their views of instruction currently taking place; their students showed the lowest achievement gains. While this is a small data set, it indicates

an area for administrators and the reading consultant to explore: the juxtaposition between being competent and over-confident.

Interestingly the item on the TSELI related to using informal student assessment data to adjust writing instruction had negative growth. This is an indicator that teachers began to realize that they were not as competent in that area as they initially thought. As K.F. Wheatley (2005) suggests, self-doubt may be helpful for teachers, as they may seek new strategies. It will be worthwhile to explore ways in which to ensure teachers have an accurate perception of their abilities so they want to continue to improve, yet still persist in working with struggling readers, believing they can affect change in student achievement.

Further Research

There are several areas indicated from this study which could use further research. The instrument used to assess teacher efficacy was one that related specifically to literacy and the types of tasks teachers do as part of that instruction. One of K.F.Wheatley's (2005) criticisms of efficacy measurement is the types of inventories available, that they are global and do not provide an accurate picture of teacher feelings for specific teaching tasks. If other types of professional development are going to be provided in a similar manner as the one outlined in this study, with content specific focus, the district will need to research what types of subject specific inventories are available, and if they are valid and reliable.

Another area for further research is also related to teacher efficacy beliefs. As discussed earlier, there is a danger in teacher's feeling overly efficacious, in that they may not try new strategies, or they may feel like they are effective, when the reality is

different, as may be the situation with second grade teachers in this study. If there is a teacher truly in this situation, how can administrators assist that individual in gaining a realistic picture of their teaching, without lowering their self-perception so much they no longer want to work with struggling readers. To this end, I suggest measuring teacher beliefs of self-efficacy after the first observed lesson, as part of the training. Teachers indicated through the interview process that it was after the first lesson was taught, observed, and feedback provided that they began to feel they may not be as effective as initially thought. Providing the type of experience where teachers get an authentic perception of their teaching abilities, which will encourage them to try and improve will be a critical component for some educators.

An interesting element to consider moving forward is collective efficacy in the building. While teachers work alone in the classroom for a great part of the day, struggling readers often have more than one instructional person working with them, and this is the case at RCE as well. Collective efficacy in a school building is related to organizational capacity to impact student outcomes (Zakeri, Rahmany, Labone, 2016). How do the teachers as a group feel about their ability to improve student reading ability? Perhaps it is this measure that is a more critical area in which to plan to impact and assess those changes.

One of the areas teachers indicated was most helpful in the training was the discussions that occurred after the presented lessons and problem solving for specific student issues. The school and the district should pursue a structure to implement that will foster these types of interactions in the future. Whether it is a formal Community of Practice, engaging in collaborative inquiry or lesson study, a specific structure should be

researched and implemented that will meet the needs of reading teachers across the building and the district.

Student reading achievement data should also be monitored, over the course of years, to see if the gains made through this training are maintained long term. Each teacher also indicated that they were not providing much fluency instruction before this professional development. Measuring student fluency gains in the future would also be a good indicator of student achievement resulting from changed teaching strategies. Finally, the administration team and new part-time literacy supervisor should monitor the use of instructional strategies from the training as part of classroom observations. Working with the literacy supervisor to provide feedback to and observations of teachers will assist in building their capacity to impact instruction in the building.

Summary

Grade level reading is critical for student success in school and life. It should be any school's goal to ensure that all children read on grade level by the end of third grade. Unfortunately this is not a reality for many children in the United States and for approximately 30% of students who attend RCE. The district has a responsibility to provide the school with the tools it needs to improve these outcomes. Not only do teachers need appropriate materials, they also need appropriate training in order to improve instruction. The training described in this study affected student outcomes and teachers' beliefs about their abilities to provide effective literacy instruction. It had the benefit of providing teachers with mastery, vicarious and verbal persuasion experiences, as well as being aligned with other quality indicators for professional development.

This action research study was undertaken as part of the plan-do-study-act model for school change and improvement. The change to providing Tier II interventions for struggling readers from LLI to small group differentiated reading instruction was teacher led, and the school and district committed to develop a professional development program designed around research-based principles of effectiveness. Empowering teachers to guide necessary changes to instruction will be critical to changing the culture in the building from one focused on external factors to those that educators in the building can influence. Establishing an autonomous environment at the school level which will allow teachers to "do what has to get done," is a critical outcome of this project (M. Wheatley, 2006, p. 167). Since teachers have the greatest impact on student achievement, investing in their knowledge, skill and self-perception is an investment in our children's reading achievement (Stronge, 2010).

It is difficult to change an organization's culture; it requires understanding the reason for change, strong relationships between the members of the organization, increased knowledge and a coherent framework for linking this new knowledge (Fullan, 2001). Changing the what goes on in small group reading instruction is only part of this change; changing the discussions in the building from "they need the reading center," to "the small group instruction is making a difference in their comprehension," is a critical shift. Teachers are now saying things like "it was hard at first, but is exciting to see how much the kids are growing," and "I told [her] that it is totally worth it. She'll see when she sees how much better they can read." Across the building, teachers are asking if they can participate in the professional development, what do they have to do to be included. This excitement has been contagious; everyone wants to be a part of seeing students

improve their reading abilities. These are critical steps in the change process, one that will keep it going. RCE is on the path to building its collective efficacy, focusing on those factors that can be controlled, working together to improve student outcomes as a team. The foundation has been laid for lasting change, driven by teachers wanting to help their struggling readers with well-designed instruction, and fostered by building and district administration. With these elements in place, the investment in student reading outcomes and in their post-secondary outcomes, is a worthwhile one.

APPENDIX A

Teacher Beliefs- TSELI Instrument

Teacher Beliefs - TSELI

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

		None at all		Very Little		Some Degree		Quite A Bit		A Great Deal
1.	To what extent can you use a student's oral reading mistakes as an opportunity to teach effective reading strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	To what extent can you use a variety of informal and formal reading assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	To what extent can you adjust reading strategies based on ongoing informal assessments of your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	To what extent can you provide specific, targeted feedback to students' during oral reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	How much can you do to meet the needs of struggling readers?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	To what extent can you adjust writing strategies based on ongoing informal assessments of your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	To what extent can you provide your students with opportunities to apply their prior knowledge to reading tasks?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	To what extent can you help your students monitor their own use of reading strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	To what extent can you get students to read fluently during oral reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you model effective reading strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	To what extent can you implement effective reading strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	To what extent can you help your students figure out unknown words when they are reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13.	To what extent can you get children to talk with each other in class about books they are reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14.	To what extent can you recommend a variety of quality children's literature to your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15.	To what extent can you model effective writing strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
16.	To what extent can you integrate the components of language arts?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
17.	To what extent can you use flexible grouping to meet individual student needs for reading instruction?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
18.	To what extent can you implement word study strategies to teach spelling?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
19.	To what extent can you provide children with writing opportunities in response to reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
20.	To what extent can you use students' writing to teach grammar and spelling strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
21.	How much can you motivate students who show low interest in reading?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
22.	How much can you do to adjust your reading materials to the proper level for individual students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX B

Sample Interview Questions

1. What aspects of the training with the presenter do you believe have had the most positive impact on your ability to implement effective literacy instructional practices in your classroom to meet the needs of diverse ability readers?

2. What aspects of the training with the presenter do you believe have had the most negative impact on your ability to implement effective literacy instructional practices in your classroom to meet the needs of diverse ability readers?

3. In what ways did the observations of the presenter and your peers positively affect your beliefs that you can implement effective literacy instructional practices in your classroom to meet the needs of diverse ability readers?

4. In what ways did the observations of the presenter and your peers negatively affect your beliefs that you can implement effective literacy instructional practices in your classroom to meet the needs of diverse ability readers?

5. In what ways did the verbal feedback and discussion about your lesson positively affect your beliefs about your ability to meet the needs of diverse ability readers?

6. In what ways did the verbal feedback and discussion about your presented lessons negatively affect your beliefs about your ability to meet the needs of diverse ability readers?

7. What information/presentations did the presenter share that had the most positive effect on your belief that you can effectively implement effective literacy instructional practices in your classroom to meet the needs of diverse ability readers?

8. What information/presentations did the presenter share that had the most negative effect on your belief that you can effectively implement effective literacy instructional practices in your classroom to meet the needs of all diverse ability readers?

9. How do you feel about your ability to implement effective literacy instructional practices in your classroom to meet the needs of diverse ability readers?

Appendix C
Small Group Reading Instruction Observation Tool

Small Group Instruction: Emergent Reader (PreK-Kind.)

(Student-read texts should fall within the Readiness-Preprimer A range)

Phonological Awareness (10 min.) – ***ORAL/SPOKEN activities only***

☐ **Listening & Rhyme**
- Identify sounds in classroom & environment
- Identify rhyming pictures
- Identify a word/picture that does not belong (odd one out)
- Produce a series of oral rhyming words

☐ **Alliteration**
- Identify similar/different beginning and ending sounds
- Sort pictures or objects by beginning or ending sounds
- Produce a word with the same beginning sound

☐ **Segment Words in Sentences**
- Find spaces between words.
- Push a block for each word in a sentence.
- Count the # of words in a sentence.

☐ **Syllables** *(pictures or spoken words only)*
- Blend syllables into a multisyllabic word (*e.g. pop-corn = popcorn)*
- Segment a multisyllabic word into syllables *(e.g. popcorn= pop-corn)*
- Count syllables in 2-4 words.

☐ **Introduce Onsets and Rimes**
- Segment onset and rimes of spoken words *(e.g. cat = /c/ - /at/)*
- Blend onset and rimes of spoken words *(e.g. /ch/ - /ip/ = chip)*

NOTE: Blending, segmenting & manipulating **individual sounds** does NOT generally occur until the **NEXT STAGE**
- E.g., stop = /s/-/t/-/o/-/p/

Word Study = Alphabet Knowledge (10 minutes)

☐ **Letter Names**
- Matches upper & lower case letters in own & classmate's names.
- Practices pointing and saying upper case letters in sequence
- Practice pointing & saying upper case in random order
- Practice pointing & saying lower case letters in sequence and random order
- Match upper case and lower case pairs
- Matches letters written in different fonts

☐ **Letter Sounds**
- Produce the sound of consonants
- Compares 2 -3 letter contrasts using picture &/or object sorts
- Picture sorts include the short vowel in the initial position.

☐ **Letter Production**
- Learns to print first and last name.
- Print upper and lower case letters
- Write a letter that represents a spoken sound
- Writes initial & final sounds in words.

Concept of Word in Text & Concepts of Print (10 minutes)

☐ **Concept of Word in Text**
- Match spoken words to print
- Track memorized text with finger, point to each word as it is read from left to right, top to bottom.
- Scaffold pointing as needed: dot for each word or beginning of each line or none
- Count words in a sentence
- Identify or find words in a sentence.
- Identify or find sounds/letters in a word.
- Once child points L-R, teach how to use initial sounds to identify a word ("Get your mouth ready for the first letter, how does it sound?)

☐ **Concepts of Print**
- Hold print materials & turn pages correctly
- Identify front cover, back cover, title page
- Distinguish print from pictures
- Locate and name . ? !

Note: Elements from each of the three main components should be incorporated into the daily small group learning plan.

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Small Group Instruction: Beginning Reader (Kind – 1st)

(Student-read texts should fall within the Preprimer B-Primer range)

Fluency: Automatic Word Recognition (8-10 min)

☐ **Rereading**
- Reread previously read texts 2-5 times
- Reads new texts at independent level (98%-100% accuracy)
- Reads text-only versions of familiar or easy texts
- Use expression and intonation
- Points to words accurately

☐ **High Frequency Words**
- Read commonly used high-frequency words
- Reads sentences & high-freq. phrases for accuracy and speed
- Adds words to personal word bank/wall/ring
- Practices reading and spelling words in isolation and in context

Word Study: Phonemic Awareness/Phonics (10-12 minutes)

☐ **Onsets and Rimes (Word Families)**
- Blend onsets and rimes in a one-syllable word *(e.g. bl-ack = black)*
- Segment onsets and rimes in a one syllable word *(e.g. black = bl-ack)*
- Segment and identify onsets and rimes in a one syllable word *(e.g. black = /bl/ is the onset, /ack/ is the rime)*

☐ **Phonemes (Medial Short Vowels)**
- Count phonemes in one syllable words *(e.g. black = 4 phonemes; chop = 3 phonemes)*
- Blend spoken phonemes to make one syllable words *(e.g. /b/ /l/ /a/ /k/ = black)*
- Segment words by producing each phoneme *(e.g. black = /b/ /l/ /a/ /k/)*
- Identify the position of a phoneme in words (e.g., *beginning, middle or end sounds*
- Delete a phoneme from a spoken word to make a new word *(e.g. delete /l/ to make back)*
- Add a phoneme to a spoken word to make a new word *(e.g. add /s/ to kip = skip)*

☐ **Phonics *(letter sounds, word families, blends/digraphs, medial short vowels, nasals)***
- Sort pictures/letters for initial/final sounds
- Sort pictures/words for word families, digraphs, medial short vowels, blends or preconsonantal nasals
- Writing sorts to practice spelling of taught and new words.
- Use Push & Say it to practice blending & segmenting taught words
- Build words with letter tiles and identify initial, medial, and final positions in words.
- Determine whether a medial vowel sound is the same or different
- Apply knowledge of word patterns to read and spell words (CVC, VC, CVCC, CVCe) in their reading, and writing.
- Apply phonics by reading timed lists of words, reading nonsense words with similar patterns, etc

Supported or Guided Reading (10-12 minutes)

☐ **Uses a PPA – Primer level text**
- Use predictable/patterned text sparingly
- Use decodable text (phonics) and controlled texts (sight words) at least 1x/week
- Include nonfiction texts
- Provide a before, during, and after reading format.
- Focus on teaching **word identification strategies**

☐ **Comprehension**
- Use titles and pictures to make predictions about the text
- Predict and locate information
- Confirm predictions after reading
- Retell events and stories orally

Towards the **end** of the Beginning Reader Stage and after whole group introduction additional comprehension skills and strategies may be practiced during small group.

☐ **Word Identification Strategies**
- Teacher has 3-4 strategies that are modeled, practiced, and displayed prominently in classroom.
- Teacher models how to use a strategy with a word in a practice sentence.
- Children practice using a taught strategy either before or after the reading.
  - Examples: Get your mouth ready, look for word parts, say each sound, read to the end of the sentence & go back. What looks right? What makes sense? What sounds right?")
- Encourage students to reread and self-correct when text does not make sense

Note: Elements from each of the three lesson components should be incorporated into the daily learning plan.

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Small Group Look For's: Transitional Reader (2nd-4th)

(Student-read texts should fall within the Primer/1st-end of 3rd grade range)

Fluency: Accuracy, Rate, Voice/Expression, and Phrasing (4-5 minutes)

☐ **Rereading**

- Reread previously read texts or read texts at independent level to develop accuracy, phrasing, rate and expression/intonation
- Notice and read punctuation accurately
- Reread as necessary to confirm and self-correct word recognition
- Timed repeated readings to build words per minute if group reads slowly
- Develop ability to read silently (if needed)

☐ **Sight Word Recognition**

- Read commonly used sight words and sight word phrases (if needed)
- Teach strategies for reading & writing multisyllabic words
- Practice reading & writing multisyllabic words
- Read regularly spelled one- and two-syllable words automatically

Word Study: Phonics & Grammar (6-8 minutes)

☐ **Phonics**

- Rely on knowledge of short vowels, consonants, consonant blends, consonant digraphs to decode and write words
- Learn common and less common long vowel and r-controlled vowel patterns to identify and spell 1-syllable words
- Learn irregular vowel patterns and consonant combinations
- Decode & write 2-4 syllable words

☐ **Grammar**

- Identify meaning of homophones and homographs
- Identify, read and write simple contractions
- Master use of simple inflected endings
- Generate synonyms and antonyms for words
- Recognize nouns, verbs, adjectives, adverbs
- Use subject verb agreement
- Read & understand simple prefixes & suffixes

Supported or Guided Reading (15-20 minutes) – reading continues beyond small group!

☐ **Word/Sentence Identification Strategies**

- Use a variety of decoding strategies to decode unfamiliar multisyllabic words
- Add meaning clues to support decoding
- Uses analogies to generalize patterns to unfamiliar and multisyllabic words.
- Use surrounding words in a sentence to determine the meaning of a word (context)
- Use knowledge of word order to check for meaning
- Follows up reading with support for challenging words/concepts

☐ **Uses a Primer/1st – early 4th grade level text**

- Provides a before, during, and after reading format.
- Uses short leveled text sparingly
- Uses mostly authentic trade/chapter books by authors/series/topic
- Balances fiction & nonfiction texts 50-50
- Links comprehension skill/strategy to the focus from the whole class read-aloud or a previously taught strategy/skill.
- Focus of reading is **fluency and understanding**

☐ **Comprehension & Vocabulary**

- Reinforce comprehension skills and strategies that have been introduced earlier during whole group instruction.
- ALWAYS sets a purpose for reading the selection!
- Provides follow-up oral /written response related to the purpose for reading
- Practice using 1-3 words from reading central to story that are common words in reading.
- Uses dictionaries **after reading** to extend word learning.

Note: Elements from each of the three lesson components should be incorporated into the daily learning plan.

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